ST KILDA

WORLD HERITAGE SITE

MANAGEMENT PLAN 2003 - 2008

The islands of St Kilda are owned by The National Trust for Scotland, which has overall responsibility for managing the site. This Management Plan for the St Kilda World Heritage Site has been agreed by The National Trust for Scotland with its partners, listed below, who are committed to working together to implement the Plan.

The National Trust for Scotland
Scottish Executive
Scottish Natural Heritage
Historic Scotland
Defence Estates *(for Ministry of Defence)*
QinetiQ *(contractors to Ministry of Defence)*
Comhairle Nan Eilean Siar (Western Isles Council)
Department of Trade and Industry Oil and Gas Office
Joint Nature Conservation Committee

The National Trust for Scotland

OIGHREACHD SAOGHAIL • WORLD HERITAGE • PATRIMOINE MONDIAL

Urras Nàiseanta na h-Alba

ST KILDA MANAGEMENT PLAN 2003 – 2008

FINAL VERSION – 22 JANUARY 2003

Final Version St Kilda Management Plan 2003 - 2008 (Website PDF).doc

ST KILDA MANAGEMENT PLAN 2003 – 2008

CONTENTS

To allow new and revised sections to be more easily added to the Management Plan, the existing text does not have page numbers. However, each page can be identified by its chapter heading, given in the top right hand corner, and by referring to this contents page, which will also be updated as necessary.

PART FOUR

Management Framework

PART FIVE

Historical Background

Description of Key Features

Risk Assessment

PART SIX

Figures and Appendices

(Not included in this PDF, but listed at Part Six.)

PART ONE

INTRODUCTION

Introduction to the Management Plan

This is the second St Kilda Management Plan to address cultural and natural (including marine) heritage interests in a balanced and integrated way and the first to do so from the basis of explicit agreement between the partner organisations closely involved in the management of the site. To develop this Management Plan, The National Trust for Scotland (the Trust) has worked with its Partners to agree a common Vision and agreed Objectives and Prescriptions for St Kilda. [See also Appendix R.] The Plan has therefore been approved by each organisation and the Trust will lead all Partners in working together to ensure its implementation.

This is therefore not only a National Trust for Scotland plan, but a Management Plan for the whole of the proposed extended World Heritage Site of St Kilda.

The members of the Partners Group are:

National Trust for Scotland
Scottish Executive
Scottish Natural Heritage
Historic Scotland
Defence Estates *(for Ministry of Defence (MoD))*
QinetiQ *(contractors to MoD)*
Comhairle Nan Eilean Siar (Western Isles Council)
DTI Oil and Gas Office
Joint Nature Conservation Committee

Purpose of the Management Plan

The St Kilda Management Plan 2003 - 2008 expresses what is most significant about St Kilda and sets out a long term Vision for integrated conservation management of these key features.

A Statement of Intent sets out desired outcomes over the five-year period covered by the Management Plan, towards achieving the longer term Vision. A series of objectives with rationales and prescriptions describe in more detail what we hope to achieve during the lifetime of this Management Plan, explaining the reasons for proposed management approaches and actions to achieve them.

This is backed up by a full description of the site and its history, along with an explanation of the management framework for the site and a summary of how the Plan seeks to respond to identified risks to the World Heritage Site.

Introduction to St Kilda

The remote Atlantic island group of St Kilda lies 41 miles (64 km) west of the Western Isles. These 4 small islands and myriad sea stacs are the product of volcanic activity some 55 million years ago. The main islands are:

Hirta	largest island and the focus of human occupation; called Hiort by the St Kildans
Dùn	small island separated from Hirta by a narrow gap in front of Village Bay
Soay	larger cliff-bound island immediately to the north-west of Hirta
Boreray	standing 4 miles north-east of Hirta

The total land mass area of these four islands and the three main sea stacs (Levenish – south-east of Hirta - and Stac Lee and Stac an Armin close to Boreray) is 854.6 ha (2111.8 acres).

Archaeological evidence suggests that St Kilda has been occupied, almost continually, for over 2000 years. The last native St Kildans were evacuated from Hirta in 1930. In the following year the islands were sold to the Earl of Dumfries, later to become 5th Marquis of Bute, who recognised the value of the bird populations on the islands and ran them as an unoccupied bird sanctuary. He then bequeathed St Kilda to the Trust in his Will and it was formally acquired in 1957. The islands are held inalienably.

Also in 1957, a military radar tracking station was established on Hirta and the whole archipelago was designated a National Nature Reserve. Since then it has been leased to and managed by Scottish Natural Heritage (formerly the Nature Conservancy Council for Scotland) who have worked in partnership with the Trust to ensure the protection of the natural features of the island. From 2003 management of the islands will revert to the Trust who will aim to ensure that cultural heritage, natural heritage interest and access are managed in an integrated way.

The radar installation serving the MoD QinetiQ Hebrides firing and testing range still operates on Hirta. It is managed on behalf of the MoD by the company QinetiQ whose personnel maintain a year-round civilian presence on the islands manning the radar, power station, living quarters and associated infrastructure. Thus the hands-on management of St Kilda is a partnership between the Trust, Scottish Natural Heritage, Historic Scotland and the MoD and QinetiQ.

The islands are designated a World Heritage Site for their terrestrial natural heritage – principally the cliffs and seabird colonies they support. In June 2004 the World Heritage Committee will consider a nomination to extend the islands' World Heritage Site status to include the marine environment and cultural landscape. St Kilda is also a Natural Nature Reserve, Site of Special Scientific Interest, Special Protection Area, National Scenic Area and Special Area of Conservation. The majority of the built heritage is protected as Scheduled Ancient Monuments.

Since the evacuation in 1930, St Kilda has had no permanent inhabitants – although since 1957 Hirta has had a temporary and/or seasonal population of first army personnel and then civilian staff at the MoD base, of Trust and SNH staff and of scientific researchers.

The annual St Kilda Work Party programme is the main mechanism the Trust has to provide public access to the islands. Through the Work Parties, small groups spend two weeks on the islands, carrying out vital conservation work, with free time to explore the area. Other visitors arrive by other means – e.g. cruise ship, private charter or yacht; and MoD, QinetiQ, Trust and other staff often arrive by helicopter. In recent years, visitor numbers have been between 1500 – 2000 per annum. Many visitors go on to join the St Kilda Club, which promotes interest in the islands throughout the world.

CONTACTS

For further information about St Kilda and this Management Plan, please contact the Highlands & Islands Regional Office of The National Trust for Scotland:

The National Trust for Scotland
Highlands & Islands Region
Balnain House
Huntly Street
Inverness
IV3 5HR

Or visit the St Kilda website – www.kilda.org.uk

The Trust's Partners in the management of St Kilda can be contacted as follows:

- SCOTTISH EXECUTIVE, Countryside & Natural Heritage Unit, Victoria Quay, Edinburgh, EH6 6QQ
- SCOTTISH NATURAL HERITAGE, Area Office for Uists, Barra and St Kilda, 135 Stilligarry, South Uist, HS8 5RS
- HISTORIC SCOTLAND, Longmore House, Salisbury Place, Edinburgh, EH9 1SH
- DEFENCE ESTATES, Forthview House, 30 Hilton Road, Rosyth, KY11 2BL
- QINETIQ HEBRIDES, Range Manager, RHQ Building 6, Balivanich, Isle of Benbecula, HS7 5LA
- COMHAIRLE NAN EILEAN SIAR, Sustainable Communities, Sandwick Road, Stornoway, Isle of Lewis, HS1 2BW
- DTI OIL & GAS OFFICE, Environment & Decommissioning Branch, Atholl House, 86-88 Guild Street, Aberdeen, AB11 6AR
- JOINT NATURE CONSERVATION COMMITTEE, Seabirds & Cetaceans Branch, Dunnet House, 7 Thistle Place, Aberdeen, AB10 1UZ

ALTERATIONS SHEET

This Management Plan is designed to be a living document, constantly referred to and updated during its lifetime. This sheet will record agreed alterations made to the Plan during implementation. For this reason, the pages of the Plan are not numbered – to allow new and revised sections to be more easily added to the existing text. However, each page can be identified by its chapter heading, given in the top right hand corner, and by referring to the contents page, which will also be updated as necessary.

PART TWO

Statement of Significance

Summary

St Kilda is a challenging place to visit because of its remoteness and its exposure to the ferocity of Atlantic wind and waves. The archipelago, formed from the rim of an ancient volcano, is an intensely dramatic landscape of sheer cliffs and sea stacs of outstanding natural beauty. This continues underwater with spectacular cliffs (the highest in the UK), reefs and caves supporting marine life of almost unparalleled richness and colour. The sea provides feeding grounds and the cliffs nest sites for the largest seabird colony in the north-east Atlantic; the birds themselves formerly providing the main harvest for Hirta's small human population. Evacuated by its community in 1930, St Kilda presents an outstandingly complete fossilised cultural landscape with a tangible sense of time-depth informed by a remarkable quantity of documentary evidence. St Kilda has long been viewed as a place apart, a place in thrall to nature, with an isolated people adrift on "the islands at the edge of the world". Today it is of universal value equally for its natural riches which are dynamic and changing, for its long cultural heritage, and for its iconic position as a poignant and powerful reminder of a past way of life.

The following paragraphs set out in more detail our evaluation of the significance of the place:

Natural Heritage

St Kilda is designated as a World Heritage Site (WHS) for its natural heritage - particularly for its superlative natural landscape, its habitats for rare and endangered species and its impressive populations of seabirds. This designation judges St Kilda to be of outstanding importance on a global scale and the islands are Scotland's only natural World Heritage Site. Other designations confirming the international and national importance of the natural heritage are National Nature Reserve, Site of Special Scientific Interest, Special Protection Area and Special Area of Conservation. The breeding seabird colonies are of such great importance because they host a very significant proportion of the world population of some species, including 20% of all Northern Gannets. In European terms it represents certainly the largest colony of many species, including Northern Fulmars and Leach's Storm-petrel.

St Kilda holds a uniquely favoured position in terms of the north Atlantic marine heritage because of its remoteness from adverse terrestrial influences and its proximity to the currents off the continental shelf. In the surrounding sea, high nutrient input and exceptionally high wave energy combine to allow deep sunlight penetration and marine life of exceptional richness. The remarkable clarity of the waters also has a significant bearing on the extent and distribution of animals and plants, which include a number of nationally rare species. St Kilda also has unusually deep kelp forests, sometimes three times the depth found in other parts of the west coast of Scotland. Geologically, St Kilda illustrates the evolution of a complex rock coast that extends in submerged form beyond the present coastline.

The terrestrial natural heritage of the islands is of outstanding national significance because of its particular vegetation, primarily mosses and lichens, which show the influence of an extreme maritime climate and because of the presence of two unique sub-species - the St Kilda wren and St Kilda field mouse.

The Soay sheep (on Hirta and Soay) are a rare survival of the most primitive breed in Europe closely resembling the domesticated sheep of Neolithic times and are especially important for the genetic purity ensured by their isolation. The Boreray blackface sheep are one of only two breeds of sheep in the UK classified as "Critically Endangered" by the Rare Breeds Survival Trust.

St Kilda is an internationally important scientific resource for both seabird studies and the Soay sheep. The sheep have been the subject of research ongoing since 1952 into herbivore ecology and genetics, the islands providing a unique European opportunity to observe a sizable population of effectively wild, large mammals that is genetically and geographically isolated.

Landscape

The landscape and setting of St Kilda is the defining characteristic of the place and the point where natural and cultural heritage interests converge. The archipelago is of outstanding scenic importance and designated as such (WHS and National Scenic Area) for its qualities of ruggedness, drama, isolation and remoteness, heightened by the constantly changing effects of climate.

Underwater the topography is just as dramatic, the power of natural forces just as evident in the caves, gullies and in the wave-induced megaripples on the sea bed, the deepest so far discovered. Views to the many sea stacs are breathtaking, emphasised by the seasonal appearance of hundreds of thousands of seabirds. Landward there is the contrast of grassy rounded hilltops, open glens, and on Hirta the great natural amphitheatre of Village Bay.

Overlying this and giving scale to it all are the remains of millennia of habitation by the islanders, in particular the hundreds of cleits scattered across the islands. The relict cultural landscape of St Kilda is unique – shaped by the islanders' relationship with their surroundings and their sustainable use of the limited natural resources on offer in this remote place.

With its sense of remoteness and the dominance of nature, the St Kilda archipelago is particularly important for its quality of wild land. However, an exception to this is in the Village Bay area where the modern MoD infrastructure and the evidence of recent human activity significantly diminishes this quality.

Modern structures such as buildings, roads, cables and masts can intrude on the feeling of isolation and landscape quality. But the scale of these modern installations is such that they are dwarfed by the scale of the topography and in aesthetic terms, the significance of the village is emphasised by its juxtaposition against the MoD base.

Cultural Heritage

The key aspects of the tangible cultural heritage of St Kilda are the structures and field systems that provide immediate, visible evidence of aspects of over 2,000 years of human habitation. Hirta in particular has a tangible sense of time-depth to its historic landscape. Though some of the structures are unique to St Kilda (e.g. scree structures and cleits (small stone-built drying chambers)) it is the totality of the remains, together with their density in the landscape, enhanced by the spectacular natural setting, that is the key to their significance. Large areas of this historic environment are designated as Scheduled Ancient Monuments indicating their outstanding national importance, covering most of Village Bay, a large part of Gleann Mor on the west side of Hirta and other smaller areas. They are particularly remarkable for their good state of preservation, their associated undisturbed buried deposits and, in some instances, their apparent continuity through time.

The 19th century was the period of greatest change for the island. An improving landlord and religious influences combined to reshape Village Bay to the ordered fan of field boundaries and the associated neatness of Village Street, which is today the emblematic image of Hirta. In terms of planned crofting settlements in Scotland, St Kilda ranks as one of the most spectacular and ambitious, and is one of the best surviving examples. It is these surviving remains of the structures built before the evacuation, which are regarded as the most significant today, as the tangible evidence of the islands' history of continuous habitation until 1930.

Because of its remoteness, St Kilda has been a source of curiosity since mediaeval times. Many travellers' accounts survive, as well as diaries and other documents written by figures in authority

(the landlord or factor, the missionary or the nurse) rather than the native St Kildans. Such a quantity of documentation is rare and perhaps unique for a simple rural society, certainly in a Scottish and perhaps a European context. Place names on the island reflect both Norse and Gaelic influence and improve our understanding of the habitation of the islands.

In spiritual terms the Village Bay settlement holds the soul of St Kilda. There are many abandoned settlements in the Highlands, but what gives St Kilda its unique emotional power is the drama and finality of the evacuation, the impressiveness of what was left behind and the widely known story of living "on the edge". Its remoteness is amplified because it is and always has been difficult to access. There is a romantic perception of its position as the archipelago "at the edge of the world" where the people lived in harmony with nature. The steep cliffs and pounding seas around the archipelago give a sense of the overwhelming power of nature, against which the very visible remains of human habitation can only fill the modern visitor with a sense of awe and respect for past generations. But perception of St Kilda remain clouded by those of 19th century travellers who were seeking experiences of the sublime, and who's writing tended to ignore those things that contradicted their expectations.

Access and Benefit

Few visitors to the archipelago remain untouched by the experience of St Kilda and for most it evokes a powerful, even spiritual, response. Many come because of a particular interest in the place, others for the recreational opportunities it affords – it is, for example, the premier dive location in Britain. However it is neither cheap nor easy to visit St Kilda and the logistics are such that only a comparatively small number will ever have the opportunity to do so at firsthand. For many it is a lifetime's dream.

Elsewhere, non-archaeologists can find it difficult to interpret or relate to slight traces of the past – but the active conservation of original structures on Hirta ensures that the messages from the past are clear and vibrant. They give visitors a real sense of walking into the past. The ongoing use of the islands as a natural and cultural laboratory offers equal potential for formal and informal education opportunities based on the current research agendas.

The St Kilda Work Parties are the Trust's main mechanism for enabling access to the islands – Work Party members carry out conservation and repair work and assist with archaeological investigation. The ongoing research programme on the islands, particularly the long-standing Soay sheep research project, offers opportunities for students and researchers to visit the islands. Many more visitors reach St Kilda by cruise ship each year; however weather conditions mean that it is not always possible to land.

Even from a distance the attraction of the place is powerful and the areas of interest multifarious - desire to access an experience of the place and information about it is therefore strong. Intellectual access to St Kilda and its story is provided in various media, from books and film to the Internet. The growing number of books about the islands is testament to the degree of interest in the place, and there is certainly a market for these works. The St Kilda website (www.kilda.org.uk) offers the chance for a worldwide audience to find out more about the archipelago and there is huge potential to interpret the islands in increasingly imaginative ways to the large numbers of people who access the site.

Social and Economic Context

On the Western Isles, of which St Kilda is a part, many feel a special bond with St Kilda and there are many other communities of interest all around the world who feel strongly about the place, evidenced by the growing membership of the St Kilda Club.

The archipelago is a great asset to Scotland, and its WHS status makes it certainly the single most important heritage asset in the care of The National Trust for Scotland. The potential of this high heritage profile is not being fully realised by the Trust currently, and the opportunity is there to spread many messages about conservation and the Trust through the medium of St Kilda.

More tangibly, it is significant as a moderate economic resource for the western seaports because of its role as a tourist draw, a destination for charter boats and cruise ships – many of which make the majority of their income from St Kilda - and as a market for the locally-sourced goods and services required for its upkeep. As part of the Western Isles, St Kilda raises the area's international profile and channels worldwide attention on this part of Scotland.

Vision Statement

St Kilda is the most highly designated property in the ownership of The National Trust for Scotland (the Trust) and is Scotland's only natural World Heritage Site. If granted, double World Heritage Site status (marine and terrestrial natural heritage and cultural landscape) will place the islands in the top league of internationally important conservation sites. With the Trust taking over direct management of the National Nature Reserve from SNH, it has an opportunity to work with partner organisations to achieve sympathetic integrated management of all interests of the archipelago.

The Vision is therefore to establish St Kilda as an internationally renowned site for integrated conservation of cultural and natural features and for sensitive public access and interpretation. It should benefit from the maintenance of the highest conservation standards and from the fullest protection, with agreed mapped buffer zones around the islands adding to the existing designations in order to safeguard its features from potential threats arising from tanker and shipping traffic, overfishing, offshore renewable energy development and unfettered access. The experience for both the virtual and actual visitor should be unrivalled with St Kilda established as a model for environmental education and informed interpretation. St Kilda will develop a global reputation for responsible and sustainable management of public interest in a fragile environment, enabling informed and inspiring access, restricted where necessary on site to avoid damage to significant features. This vision should be underpinned by a management structure with appropriate resources for the islands that supports on-site staffing needs, the delivery of integrated conservation advice, liaison with visitors, stakeholders and the local community and a partnership approach between the Trust, Scottish Natural Heritage, Historic Scotland and the MoD and its agents.

Guiding Principles

The management of St Kilda will be defined by the following principles. They provide the long-term framework for management and a basis for assessing and selecting objectives.

1. **St Kilda will be managed as a model of integrated conservation management**, **where natural and cultural interests are considered together.**

   Where the needs of nature conservation and cultural heritage are in opposition, decisions will be made in partnership with others on a case-by-case basis with reference to the Trust's Conservation Principles [see Appendix B], to statutory obligations under SSSIs, SAMs and EU Directives and to the need to conserve the World Heritage values of the islands, using the significance of the features in question to make a judgement and aiming to optimise significance.

2. **St Kilda's NNR designation requires that the principal land-use of the islands will be conservation.**

   The islands and the surrounding seas will be managed for the conservation of their cultural and natural heritage assets, so as to maintain and enhance the key features of their major conservation designations – particularly the NNR, SSSI, NSA, SAC, SPA, SAMs and WHS – providing a best practice example for others to follow.

3. **For natural heritage interests, natural processes will normally be allowed to continue without intervention.**

   Intervention will only be undertaken where it is necessary to protect natural or cultural features of greater significance from deterioration. Decisions will be made on a case by case basis and any actions taken should be reversible and give minimum disturbance to significant features, species and habitats.

4. **For cultural heritage interests, conservation action will proceed on the basis of minimum intervention required to retain the significance of the site**.

   This will allow for a variety of conservation approaches from recording to consolidation and even repair. This principle takes account of the need to retain intangibles, such as atmosphere and spiritual significance, by arresting decay, as well as respect for original/authentic fabric. Without the policy of consolidation and active conservation work to the Village Bay structures much of the impact and immediacy of these remains would be diluted.

5. **The sheep of Soay, Hirta and Boreray will continue to be treated as wild and unmanaged animals.**

6. **For the marine natural heritage, the same level of protection as that on land will be sought, to minimise threats from external impacts.**

7. **Any new development on the islands will only proceed if its effect upon all aspects of heritage significance are evaluated and judged to have only minimal detrimental effect upon the heritage features, landscape or wild land quality of the place, if the developments are essential, temporary and reversible and if there is no conflict with statutory obligations, e.g. the Habitats and Bird Directives and the Environmental Impact Assessment (Scotland) Regulations 1999**.

   It is recognised that some element of development on Hirta is inevitable, whether to run conservation operations, to facilitate access or in regard to the lease to MoD. The aim will be to leave the significance of the place untouched. All developments will be subject to an environmental impact assessment and will be designed and managed to have minimum negative impact on their environment.

8. **Scientific research that improves the understanding of the heritage features of the property or guides its management to protect its outstanding universal values will be encouraged.**

   The Trust will carry out or commission research to advance understanding of St Kilda and underpin management decisions. Research will be permitted if it can be demonstrated as requiring the unique opportunities that St Kilda offers, providing that it is in keeping with NNR and SAM status, does not damage key features and does not cause unacceptable disruption to visitor experience. There will be a presumption that natural heritage research (including research on the Soay sheep) will be by observation only. Any research will be considered on a case by case basis. Cultural heritage research by intervention will only be permitted if it is part of the St Kilda Archaeological Research Plan.

9. **Education and interpretation programmes will be developed in partnership with others to instil a long-lasting appreciation for both the qualities of this unique site and the importance of sustainable conservation management at St Kilda and across the globe.**

   This principle allows for the establishment of interpretation facilities on the Western Isles. On site interpretation should not detract from the unique "spirit of place" on Hirta.

10. **Access for visitors, whether in person or through interpretive materials will continue to be provided.**

    Visitor interests, including recreational activity, will be positively yet responsibly managed to ensure no negative impact on the islands' significant features, whilst providing an inspiring experience for the visitor.

Statement of Intent

Previous Management Activities

St Kilda has been managed for conservation since 1931, when the islands were sold to the Earl of Dumfries, later to become 5th Marquess of Bute and managed, unoccupied, as a bird sanctuary. In 1957, at the same time that the gift of the islands from the Marquess to the Trust was accepted, the islands were declared a National Nature Reserve (NNR). They have been managed for conservation and access since then by a partnership between the Trust (who have had responsibility for the cultural heritage), SNH (who have managed the NNR), the MoD and Historic Scotland. This partnership has ensured that natural heritage features have been maintained and monitored and that the built remains on the islands have been conserved and, where necessary, consolidated.

In 2003 the Trust will take the management of the St Kilda NNR in-hand from SNH. The development of an integrated team of conservation professionals in the Trust's Highland and Islands Region supports the line management of the property and means that the Trust now has the expertise in the Region to take on the direct management of the islands' natural heritage. The next priority must be to set in place on-site staffing and facilities that adequately support the conservation and access needs of the whole property.

This change in direct management brings the opportunity for the Trust, supported by and working with its partners, to lead the integrated management of all heritage interests of the property and to develop the joint approach to long term partnership planning for St Kilda that has begun with this Management Plan. This is the second St Kilda Management Plan to address all heritage interests together and the first to do so from the basis of explicit agreement of all partner organisations.

The opportunities that this new approach offers are constrained by limited funding for the site, which is currently managed on a minimum-spend basis. The development of new funding sources for St Kilda must be a priority to support conservation objectives in the Plan through increased expenditure and to increase the property's endowment.

The land mass of the islands is comprehensively protected through Trust ownership and through designations such as the NNR and Ancient Monument Legislation. Trust ownership extends only as far as the mean low water mark, but a number of specific measures have been put in place in the marine environment around the islands to address specific concerns. These include the Recommended Deep Water Route west of the Western Isles. In addition, the UK government placed a moratorium on the issues of oil licences within 70 km of St Kilda whilst this Management Plan was being constructed. A risk assessment covering all identified threats now needs to be prepared and formal measures put in place to mitigate these. These will be consolidated by the marine extension to the World Heritage Site and the marine SAC.

Since 1958 St Kilda Work Parties have provided access to Hirta, with participants/visitors gaining a first hand insight into the history and conservation needs of the site. The museum, housed in one of the re-roofed cottages, tells the story of the place, its natural heritage and its people. The website, launched in 2001, has given thousands of virtual visitors an opportunity to experience the sights and sounds of the islands. In 2001, the UK outbreak of Foot and Mouth Disease saw access restricted to protect the Soay sheep stock, with strict disease control measures put in place.

In the light of these previous activities, the Trust will seek to achieve the following outcomes over the period of the 2003 – 2008 Management Plan.

Management Plan Outcomes

Objectives and prescriptions will address immediate management priorities to deliver:

1. Extension of World Heritage Site status to include the marine environment, cultural landscape and buffer zones.
2. A framework to involve partner organisations in supporting the integrated conservation management of the property and proposed extended World Heritage Site, the Natura 2000 site and any of its proposed extensions.
3. Enhanced staffing and financial resources to meet the operational needs and Vision for the property.

In addition, there will be a focus on continuous improvement of conservation management as well as the provision of access and benefit, to achieve the following outcomes:

4. Continued conservation of historic and natural features to maintain them in favourable condition: *this work is in the main characterised as ongoing, routine and established practice.*
5. Action to mitigate urgent threats and perceived threats to key features: *this work is mainly concerned to safeguard key features under unusual threat, or to address risk of such threat and establish appropriate mitigation mechanisms (e.g. rat infestation, coastal erosion, increased recreational use, etc.)*.
6. Enhanced knowledge about the islands and their cultural and natural features and greater promulgation of research results to share knowledge and understanding.
7. Continued provision of informed, responsible, virtual and enjoyable access.
8. Establishment of education and interpretation programmes that promote a greater understanding both of St Kilda and of sustainable conservation management amongst visitors and non-visitors.
9. Regular liaison with the local community (Western Isles) to understand each other's aspirations for St Kilda and develop educational links to deliver 8) above.
10. Assessment of options and agreed plan of action for increasing the property financial endowment.

SUMMARY TABLE:

ACTIONS TO ACHIEVE THE OUTCOMES IN THE STATEMENT OF INTENT

The table below notes the objectives and prescriptions which have been developed to deliver each of the outcomes set for this Management Plan in the Statement of Intent. It summarises our planned objectives and actions for the five year period of the Management Plan – based on the Statement of Significance and long term Vision for the islands.

OUTCOME 1: Extension of World Heritage Site status to include the marine environment, cultural landscape and buffer zones.
Objective 28 and Prescriptions To seek to extend the World Heritage Site designation to include the cultural landscape and the surrounding seas.
OUTCOME 2: A framework to involve partner organisations in supporting the integrated conservation management of the property and proposed extended World Heritage Site, the Natura 2000 site and any of its proposed extensions.
Objective 29 and Prescriptions To ensure the internationally important features of the seas surrounding St Kilda are protected through European legislation. *Objective 31 and Prescriptions* To ensure Trust staff maintain an overview of the islands and liaise with partners and stakeholders as appropriate. *Objective 36 and Prescriptions* To ensure the Trust has a plan in place in the event of the MoD leaving St Kilda.
OUTCOME 3: Enhanced staffing and financial resources to meet the operational needs and Vision for the property.
Objective 32 and Prescriptions To ensure that this internationally important property is managed to the highest standards. *Objective 34 and Prescriptions* To ensure that all those working on, and visiting, St Kilda have the necessary induction and training. *Objective 35 and Prescriptions* To ensure adequate logistical support for those involved in the management of the archipelago. Objective 37 and Prescription 37.2 To ensure there are adequate financial sources available to manage St Kilda to World Heritage standards.
OUTCOME 4: Continued conservation of historic and natural features to maintain them in favourable condition.
Objective 1 and Prescriptions To review, agree and implement 5-yearly Management Agreements for the archaeology of Hirta with Historic Scotland. Objective 2 and Prescriptions To prevent the degradation of certain structures (in use and ruinous) by undertaking planned monitoring and maintenance. *Objective 3 and Prescriptions* To regularly monitor the archaeological structures that are beyond the zone of intervention on Hirta, and further afield. *Objective 6 and Prescriptions* To ensure that the collections and artefacts from St Kilda currently in the Trust's ownership are appropriately cared for.

Objective 9
To maintain and enhance the landscape of St Kilda.

Objective 11 and Prescriptions. 11.2 and 11.3
To maintain the Natura plant communities in favourable condition.

Objective 12 and Prescriptions
To ensure there is no avoidable loss of nationally important plants.

Objective 13 and Prescription 13.1
To ensure that characteristic island races of wrens and field mice are maintained.

Objective 14 and Prescriptions

To determine population trends of breeding terrestrial birds on the NNR.

Objective 15 and Prescription 15.1

To ensure the genetic conservation of the flocks of Soay sheep on Soay and Hirta, and of the blackface sheep on Boreray.

Objective 21 and Prescriptions 21.1 – 21.3
To maintain the populations of internationally important breeding seabirds in favourable condition, as indicated by total numbers and the proportion of the relevant biogeographical population.

Objective 23 and Prescription 23.1

To maintain the internationally important shoreline and underwater habitats in favourable condition.

Objective 25 and Prescriptions
To ensure that biological information for St Kilda is collected, managed and collated in a consistent manner.

Objective 33 and Prescriptions
To continue to organise and run a series of Work Parties to St Kilda.

OUTCOME 5: Action to mitigate urgent threats and perceived threats to key features.

Objective 4 and Prescriptions

To undertake rescue excavation and recording of threatened sites only where no other form of management can effectively save them.

Objective 9 and Prescriptions
To maintain and enhance the landscape of St Kilda.

Objective 10 and Prescriptions
To ensure that there is no significant damage to the geological and geomorphological features, both on land and underwater.

Objective 11 and Prescriptions 11.1 and 11.4
To maintain the Natura plant communities in favourable condition.

Objective 15 and Prescription 15.2 – 15.4

To ensure the genetic conservation of the flocks of Soay sheep on Soay and Hirta, and of the blackface sheep on Boreray.

Objective 16 and Prescriptions

To continue to use the sheep flocks as a natural laboratory into herbivore ecology and genetics.

Objective 18 and Prescriptions

To take every effort to ensure that rodents, mustelids and cats do not enter the NNR.

Objective 19 and Prescriptions
To keep the island free of further introduced species.

Objective 20 and Prescriptions
To ensure that shore-based activities do not impact on the marine environment.

Objective 21 and Prescriptions 21.4 – 21.6

To maintain the populations of internationally important breeding seabirds in favourable condition, as indicated by total numbers and the proportion of the relevant biogeographical population.

Objective 22 and Prescriptions To maintain the resting and feeding areas of the internationally important populations of breeding seabirds in favourable condition. *Objective 23 and Prescriptions 23.2 – 23.4* To maintain the internationally important shoreline and underwater habitats in favourable condition.
OUTCOME 6: Enhanced knowledge about the islands and their cultural and natural features and greater promulgation of research results to share knowledge and understanding.
Objective 5 and Prescriptions To assess the existence and importance of any wreck sites on or around the archipelago. *Objective 7 and Prescriptions* To enhance historical knowledge through collation of information on contents of various archives, libraries, museums, etc. and on research projects completed or underway. *Objective 8 and Prescriptions* To enhance knowledge through enabling further non-invasive study and recording, as well as through appropriate invasive work. *Prescription 13.2* Carry out further research on the field mice, particularly on the distribution of the mice, on genetic distinctions between islands, and on genetic variability of the populations. *Objective 17 and Prescriptions* To ensure that knowledge of the importance of the St Kilda sheep is widely promulgated. *Objective 24 and Prescriptions* To ensure any research undertaken is in accordance with Natura and NNR objectives.
OUTCOME 7: Continued provision of informed, responsible, virtual and enjoyable access.
Objective 26 and Prescriptions To enable access to St Kilda while taking any steps required to minimise the impact of visitors on the natural and cultural heritage of the islands.
OUTCOME 8: Establishment of education and interpretation programmes that promote a greater understanding both of St Kilda and of sustainable conservation management amongst visitors and non-visitors.
Objective 27 and Prescriptions To provide appropriate orientation, interpretation and educational material for St Kilda to promote a greater understanding and appreciation of the island and the importance of sustainable conservation management.
OUTCOME 9: Regular liaison with the local community (Western Isles) to understand each other's aspirations for St Kilda and develop educational links to deliver 8) above.
Objective 30 and Prescriptions To foster interest in the St Kilda archipelago.
OUTCOME 10: Assessment of options and agreed plan of action for increasing the property financial endowment.
Objective 37 and Prescription 37.1 To ensure there are adequate financial sources available to manage St Kilda to World Heritage standards.

PART THREE

OBJECTIVES, RATIONALES AND PRESCRIPTIONS

In order to move towards achieving the Vision for St Kilda, and to achieve the desired outcomes expressed in the Statement of Intent over the next five years, we will seek to implement the following objectives during the lifetime of this Plan, via the prescriptions and actions listed for each one.

Conservation

CULTURAL HERITAGE

Archaeology general, including roofed buildings

Objective 1

To review, agree and implement 5-yearly Management Agreements for the archaeology of Hirta with Historic Scotland.

Rationale:

A five-year Management Agreement for the ancient monuments of Hirta, St Kilda, was first agreed between The National Trust for Scotland and Historic Scotland (HS) in 1996. This ensures financial support from the Scottish Executive towards cultural heritage work on St Kilda. The Agreement has gradually developed [see Appendix G] and zones have now been identified where there will be regular maintenance and repair of structures, and other areas where only monitoring will take place. It is recognised that the Agreement will continue to develop and that, in particular, the non-intervention zone will require regular review.

Prescriptions

1.1 Continue to monitor and manage the archaeology of Hirta, (whether upstanding buildings or ruined structures, or those buried beneath the soil), through procedures for the different zones of intervention/non-intervention that are agreed with Historic Scotland at regular intervals.

Objective 2

To prevent the degradation of certain structures (in use and ruinous) by undertaking planned monitoring and maintenance.

Rationale:

Ever since the archipelago was passed to the Trust there have been programmes of work to restore and maintain features within Village Bay [see Figure 6]. Today, this work is guided by a range of Method Statements (within the Management Agreement with HS) which have been based upon the advice from HS and the years of experience of repairing structures in Village Bay. It will include the investigation of any poor quality repairs undertaken in previous years and any appropriate action.

In heavy rain, water pours across the landscape, affecting structures and revetment dykes (cut into slopes to prevent landslide), as well as scouring the bed of the Dry Burn, putting great pressure on lines of least resistance, including the drains around the cottages and the places where the Dry Burn passes under the head dyke and lower dyke. The need for work to alleviate this problem is also noted in the Management Agreement with Historic Scotland.

Due to coastal erosion over the winter of 2001/2, the Store now sits perilously close to the cliff edge – actions to address this issue are discussed at Objective 4.

Prescriptions

2.1 Monitor and maintain structures above and below the Village Bay head dyke in accordance with the agreement with Historic Scotland and procedure for Potentially Damaging Operations.

2.2 The Trust will continue to use St Kilda Work Parties to maintain structures where possible, but will investigate ways in which professional input to the various methodologies can be enhanced.

2.3 Improve the recording of all maintenance work by producing structure reports for every in-use or ruinous structure that will be actively maintained or has been repaired over the last 50 years.

2.4 Continue to investigate appropriate methodologies for cleit roof repairs.

2.5 Working with HS and SNH, the Trust will investigate the need and options for bracken control, the reinstatement of drains, and the removal of builders' debris, and carry out work as appropriate.

2.6 Working with a professional dyker, consider and implement a solution to the maintenance problems of the Dry Burn.

Objective 3

To regularly monitor the archaeological structures that are beyond the zone of intervention on Hirta, and further afield.

Rationale:
There are hundreds of structures and features outwith the zone of maintenance agreed in the Management Agreement with Historic Scotland that are of national importance and regional importance, although the majority of these are within areas scheduled as ancient monuments. These archaeological sites require monitoring so that future management can be based on a knowledge of rate of decay, etc. Work should begin now on identifying methods and funding for this work.

Prescriptions

3.1 The Trust will work with Historic Scotland to monitor the structures and features within and beyond the areas scheduled as Ancient Monuments - work which will continue to include the monitoring of the coastal erosion of Village Bay.

3.2 The Trust will take forward the wider cleit monitoring programme, developed during the first Management Agreement with Historic Scotland.

3.3 The Trust will suggest and implement new approaches and subjects to the monitoring programme as appropriate, following discussion with Historic Scotland and SNH.

Objective 4

To undertake rescue excavation and recording of threatened sites only where no other form of management can effectively save them.

Rationale:

The Trust's Conservation Principles require that the unmonitored destruction of features and structures of significance does not take place. If a feature is destroyed, the knowledge and understanding that can be gleaned from it disappears too. If a feature cannot be saved by human intervention, it should be recorded before it is lost. All work will continue to be carried out in accordance with the consent procedure for Potentially Damaging Operations identified by SNH for the SSSI.

Prescriptions

4.1 Record and assess the archaeological deposits under threat from coastal erosion in Village Bay, particularly those affected by the presence of the gabion baskets at the seaward front of the MoD complex and by the Store.

4.2 Explore the possibilities for excavation of sites threatened by decay or coastal erosion.

Wreck sites

Objective 5

To assess the existence and importance of any wreck sites on or around the archipelago.

Rationale:

There are at least three crashed aircraft on land and many tales of lost ships under the seas around the cliffs of St Kilda, but little is known of the survival of wrecks beneath the waves. This is potentially a subject of concern and the Trust should work with others to develop a knowledge of this aspect of St Kilda's past.

Prescriptions

5.1 The Trust will work in partnership with SNH, Historic Scotland and visiting divers to ascertain whether any wreck sites have survived the turbulent waters around St Kilda.

5.2 Following this work, a project of survey, assessment and conservation will be developed for implementation.

Collections and Artefacts

Objective 6

To ensure that the collections and artefacts from St Kilda currently in the Trust's ownership are appropriately cared for.

Rationale:

The Trust's collections that are from or of St Kilda are of international and national significance. Since the 1980s much of the St Kilda material has been in the care of Glasgow Museums and Art Galleries (GMAG). It is not on permanent display. The agreement that established the relationship between GMAG and the Trust is now out-of-date [see Appendix J]. Both organisations should work together to produce a policy for the future well-being of the Trust collections from the archipelago. A small amount of material is also on loan to other organisations and the benefits of these items being integrated into the main collection should be considered.

Prescriptions

6.1 The Trust will work with GMAG to develop and implement best practice in relation to the long-term ownership, curation, conservation and display of the collections and artefacts cared for by GMAG and NTS.

6.2 The Trust will review the material loaned to other organisations with a view to consolidating it within a single collection.

Social History and Documentary Sources

Objective 7

To enhance historical knowledge through collation of information on contents of various archives, libraries, museums, etc. and on research projects completed or underway.

Rationale:
There is a vast wealth of primary and secondary sources about St Kilda held by a great variety of organisations. Enquiries about St Kilda account for the majority of researcher visits to the Trust's archives. Work was done to list the material by Mary Harman, as part of her PhD thesis, but there has been a hiatus since then. A project to provide a concordance of sources on St Kilda, potentially available through the St Kilda website, would be of great benefit to all those undertaking research or with a general interest in the archipelago.

The project will entail the collation of St Kilda material held by the Trust, SNH, HS, RCAHMS, Highland Council, other Scottish institutions and those further afield, combined with information on related research projects; and the dissemination of the information as widely as possible.

Prescriptions

7.1 In the first instance, develop and implement a six-month project, to be undertaken by a research assistant, to collate the sources already known about and assess the amount that needs to be added. A continuation project will then be put in place to maintain and update the data on a regular basis.

Cultural Landscape Research

Objective 8

To enhance knowledge through enabling further non-invasive study and recording, as well as through appropriate invasive work.

Rationale:

The archaeological, historic, and cultural heritage of St Kilda is of international importance. Continued research is an absolute requirement in the development of our understanding of the significance of the cultural landscape and informs conservation practice. However, such work must be guided by the St Kilda Archaeological Research Committee (SKARC) principle that invasive work should only take place on St Kilda if that is the only place that it can be undertaken, and if the research has been embraced by the St Kilda Archaeological Research Plan.

SKARC members include archaeological representatives of the Trust (Chairs), Historic Scotland, Royal Commission on the Ancient and Historical Monuments of Scotland, Comhairle Nan Eilean Siar as well as individuals and University departments involved in past and current archaeological research on St Kilda. [See also Appendix I.]

Prescriptions

8.1 The Trust will continue to organise and run the St Kilda Archaeological Research Committee (SKARC) which will regularly review the St Kilda Archaeological Research Plan.

8.2 Ensure that all research projects match the principles established by the SKARC and are thereby approved by the Trust, and have any necessary permissions from HS and SNH.

8.3 Encourage the dissemination of information on all stages of research projects, through newspaper articles, interim reports, web articles and general interest publications, as well as academic journals. [Link to 7.1]

LANDSCAPE

Landscape – general

Objective 9

To maintain and enhance the landscape of St Kilda.

Rationale:
The St Kilda archipelago is a designated National Scenic Area (NSA), and its landscape, of both national and international importance, is an interplay of the cultural and natural features. The NSA requires us to ensure that the outstanding landscape qualities of the archipelago are not damaged by developments. The Guiding Principles in the Vision Statement state that the principal land use will be conservation, so that any action must not compromise the conservation value. The wild land quality of the more remote areas of the islands must also be protected.

Although there is a presumption against any new structures being built on St Kilda, there is an occasional need for new buildings or structures on Hirta to assist with the running of the MoD base. Guidance on good practice and on the principles to guide future works should be developed to provide a positive terms of reference for future works in the landscape. However, on the other islands, strict landscape conservation is the priority, with the presumption that they be treated as wild land.

Ground disturbance is classified by SNH as a Potentially Damaging Operation (PDO) within the SSSI, and also needs consent from Historic Scotland via Scheduled Monument Consent (SMC) in scheduled areas.

Action in the past has been taken to use hard defences to prevent coastal erosion at the north side of Village Bay, but the long-term effectiveness of these is in doubt, as well as going against the Vision Statement's Guiding Principle of non-intervention in natural processes. However, archaeological features may be under threat, and there needs to be a study to identify the long-term trends in coastal processes, and the long-term solutions.

Prescriptions

9.1 Ensure that there are no new buildings or structures erected on the islands of the archipelago other than Hirta.

9.2 The Trust, SNH and HS will work with the MoD and its agents to ensure any essential new structures, or activities, on Hirta will have minimal impact on the archaeological, natural and landscape features.

9.3 Through the formal NTS/MoD lease framework, agree to reduce the landscape impact of existing and new MoD structures, and to remove redundant infrastructure.

9.4 Ensure any action requiring ground disturbance has the necessary consent from Historic Scotland and SNH, and that all relevant developments are monitored and reported on by a Trust Archaeologist or an approved contracted archaeologist.

9.5 Ensure that there is no off-track use of vehicles on Hirta.

9.6 NTS, SNH, HS and the MOD will work together to identify, and then implement, the best long-term solution for dealing with coastal erosion in Village Bay.

Landforms and Geology

Objective 10

To ensure that there is no significant damage to the geological and geomorphological features, both on land and underwater.

Rationale:
Agreed developments on Hirta have had a negative impact on heritage features in the past, for example, the construction of roads, shore defences and the creation of a large quarry. Any future development must have no more than minimum detrimental affect on the heritage features (*see Guiding Principle 7 in Vision Statement*) – which certainly means no creation of new quarries, or expansion of existing quarries, or extraction of sand or gravel. In practice, any disturbance of the ground, or even geological sampling, is a Potentially Damaging Operation under the SSSI designation and needs formal approval from SNH. Likewise, there should be no damage to the underwater geology and geomorphology.

Imported material should be used for future works, except for small-scale operations where no significant impact will occur; and if material is imported, care should be taken to avoid importation of species not indigenous to St Kilda. Importation of soil must be avoided [see 19.4].

Prescriptions

10.1 Ensure any action on land affecting any geological or geomorphological feature, including geological sampling or ground disturbance (as a Potentially Damaging Operation), has the required consent from SNH.

10.2 Ensure that engineering or extractive works (e.g. aggregate extraction) to the intertidal zone or offshore do not damage the marine habitats through direct physical disruption, alteration of the current or wave patterns or through increasing the sediment load.

10.3 Where construction material is needed, there should be an assessment on a case by case basis of whether local stone can be used, or if stone has to be imported.

NATURAL HERITAGE - TERRESTRIAL

Terrestrial vegetation

Objective 11

To maintain the Natura plant communities in favourable condition.

Rationale:
The grazing situation that was current at the time of the submission of the SAC designation should be maintained – i.e. Hirta, Soay and Boreray grazed by the unmanaged sheep flocks; and Dun ungrazed. The six yearly cycle for monitoring qualifying features matches the monitoring requirements of the Habitats Directive, and the method used will be that recommended by SNH.

A Guiding Principle in the Vision Statement notes that “natural processes will normally be allowed to continue without intervention”. In practice, although this will be the policy over most of the archipelago, within the head dyke in Village Bay there may be cases where, to conserve cultural and archaeological features, specific vegetation patterns are aimed for.

Prescriptions

11.1 Seek consent from SNH before undertaking any Potentially Damaging Operation.

11.2 Maintain the current grazing status quo.

11.3 Monitor the SAC qualifying features every six years.

11.4 Ensure that any human activity does not damage the significant features of the vegetation.

Objective 12

To ensure there is no avoidable loss of nationally important plants.

Rationale:

Because of its geographical isolation, St Kilda has a relatively low number of vascular plants, and none of national importance. The vegetation communities they form, though, are seen as important in European terms (hence the Natura designation) owing to their combination of montane and hyper-oceanic characteristics.

However, the archipelago does contain lower plant species (bryophytes and lichens) of national importance, and, although there is probably little management action in practice that can be undertaken to ensure this rich assemblage is maintained, we need to be sure of the main locations of these species, and to monitor the ecological trends.

The flora also contains interesting examples of "niche expansion" where one species has occupied the niches filled by several other species in the Western Isles. These may well be represented by a range of different (perhaps unique) genotypes, and would repay further investigation.

Prescriptions

12.1 Identify the main locations of the nationally important bryophytes and lichens.

12.2 Monitor these species every six years.

12.3 Investigate the range of different genotypes represented.

Indigenous animals (excluding seabirds)

Objective 13

To ensure that characteristic island races of wrens and field mice are maintained.

Rationale:

The wren population has been surveyed in 1957 and 1993, showing little apparent change. Currently the wrens and mice appear to be under no threat, and can be left to themselves. However, there is not much known about the abundance and distribution of the field mouse, or its genetic variability.

The biggest threat to these species would be introduced rats, mink or cats, or the associated control programme. Hence, we need more information on the mouse populations so that any control programme does not put the mouse at risk; additionally, it needs to be ascertained if any control programme would affect the wrens [see also rationale for prescriptions on introduced species - Objective 19].

Prescriptions

13.1 Continue the long-term monitoring of the wren population.

13.2 Carry out further research on the field mice, particularly on the distribution of the mice, on genetic distinctions between islands, and on genetic variability of the populations.

Objective 14

To determine population trends of breeding terrestrial birds on the NNR.

Rationale:
The numbers of breeding terrestrial birds appears to fluctuate from year to year, but there is no systematic recording of these species, other than peregrines.

Prescriptions

14.1 Agree with SNH a programme of monitoring of terrestrial breeding birds.

Sheep

Objective 15

To ensure the genetic conservation of the flocks of Soay sheep on Soay and Hirta, and of the blackface sheep on Boreray.

Rationale:

The sheep are treated as wild animals [see Guiding Principle 5 in the Vision Statement]. The action of natural mortality and therefore natural selection on the population is seen as important in maintaining their genetic adaptation to the harsh environment. The persistence of the primitive breed of Soay sheep, free of genetic input from modern breeds, is one of their most significant and remarkable features. Importation of any sheep would fundamentally compromise this. The Boreray blackface sheep are also classed as a critically endangered rare breed. The sheep are also a cultural resource, a key part of the human story of the islands.

It is important to keep the genetic distinction of feral sheep on Boreray, and there should be no movement of sheep between the islands – although there might be an exception if a serious outbreak of disease threatened the Soay or Hirta populations. The maintenance of these genetic resources is a priority and when considering techniques to provide a back-up genetic resource, full consultation with the Rare Breeds Survival Trust would take place before a decision is made to create another Soay and/or Boreray blackface flock on an island elsewhere in the Western Isles.

The outbreak of Foot and Mouth Disease in 2001 highlighted the necessity of ensuring that these internationally important flocks are not threatened by new life-threatening diseases, or by culls implemented to control the diseases. Our commitment to sound waste management activities (Objective 18) will include appropriate control of human food and other organic waste.

Prescriptions

15.1 Continue the practice of non-intervention in the management of the flocks.

15.2 Ensure there is no importation of sheep into the archipelago, or movement of sheep between the different islands (except that movement from Soay to Hirta may be permitted under exceptional circumstances.

15.3 Prevent where possible the importation of livestock diseases and parasites that might threaten the sheep population (e.g. Foot and Mouth Disease), and agree a code of conduct for those in direct contact with the sheep.

15.4 Give consideration to the idea of creating another self-sustaining flock of Soay and/or Boreray blackface sheep on an island elsewhere in the Western Isles, to ensure preservation of the gene pool in the event of disease on St Kilda.

Objective 16

To continue to use the sheep flocks as a natural laboratory into herbivore ecology and genetics.

Rationale:

The Soay sheep on Hirta have been subject to a long-running study as one of the few unmanaged populations of large, wild herbivores in the UK. Any research programme needs a positive answer to the question "Does this research have to be done on St Kilda?", and a justification made. There have been concerns raised in the past about some 'invasive' research, and in future such research will be restricted to small-scale invasions or manipulations, such as the taking of blood or parasite samples. In practice, any research needs to have the agreement of the Trust / SNH. Home Office Licences under the Animals (Scientific Procedures) Act (1986) are subject to ethical review and legal enforcement.

Prescriptions

16.1 Ensure any research undertaken is in keeping with the site being an NNR, with a presumption against large-scale manipulations and consideration of small-scale manipulations on a case by case basis.

16.2 Ensure any research beyond pure observation is covered by Home Office Project and Personal Licences.

Objective 17

To ensure that knowledge of the importance of the St Kilda sheep is widely promulgated.

Rationale:

The international importance of the St Kilda sheep populations is not widely known by the general public; neither is the importance and results of the research undertaken. The sight of dead sheep sometimes upsets visitors to St Kilda, particularly at the time of population crashes. More information about the importance of the sheep and the reasons for their non-management and natural death would help visitors to understand both the presence of carcasses on the island and the value of the sheep and of this hands-off approach.

Prescriptions

17.1 Disseminate widely the importance of the sheep populations, both for genetic reasons (survival of old breeds) and as a natural laboratory for research.

17.2 Disseminate widely important knowledge that has been gained from researching the St Kilda sheep, including the production of a layman's guide to the work of the researchers.

Introduced species

Objective 18

To take every effort to ensure that rodents, mustelids and cats do not enter the NNR.

Rationale:

A meeting to discuss the issue of preventing the invasion of rats and mink (or any species of rodent or mustelid) took place in January 2000, involving a wide range of interested parties. General agreement was reached, with a draft code of practice and contingency plan drawn up. This urgently needs to be finalised into a code of practice that seeks to ensure all boats have rat [Brown Rat *Rattus norvegicus*] control measures in place and incorporated into the management of the islands.

Any control programme must take into account its impact on the important wren and field mouse populations, to ensure these species are not adversely affected.

Prescriptions

18.1 Agree and distribute bylaws and/or code of practice for visiting ships and helicopters, for importation of goods, and for waste management.

18.2 Agree a contingency plan in the event of a suspected rat or mink arrival, and ensure necessary materials are kept on the island.

18.3 Carry out annual monitoring (chew sticks) in likely areas of rat introduction.

Objective 19

To keep the island free of further introduced species.

Rationale:

St Kilda has a relatively small indigenous terrestrial flora and fauna, indicating both that ecological conditions are harsh and that the rate of natural colonisation of the archipelago is low. Humans have introduced species accidentally and intentionally in the past, some of which have become accepted as part of the St Kilda scene (e.g. Soay sheep and mouse). However, introduced species are generally the main threat to the biodiversity of remote islands, and every effort must be made to ensure that they do not arrive. If a new non-indigenous plant or animal is observed, then it should be removed before it has a chance to spread – unless the balance of probability is that it arrived on the archipelago outwith the hand of man. The bylaws also prohibit the landing of dogs on any part of the archipelago – a dog could introduce a new parasite which could put indigenous animals at risk.

Prescriptions

19.1 Adhere to the current bylaw that prohibits the introduction of species alien to the archipelago and any landing of dogs on the island.

19.2 Ensure that any species of animal or plant that arrives on the island through human action, either accidentally or intentionally, is removed as soon as it is observed, with regular monitoring of the most likely areas of arrival (Village Bay).

19.3 Prepare a checklist of indigenous plants to be held by the St Kilda Ranger to ensure that introduced species can be easily recognised as soon as they arrive.

19.4 Imported building material should be screened or washed to ensure no species alien to St Kilda are imported.

NATURAL HERITAGE - MARINE

Marine – general

Objective 20

To ensure that shore-based activities do not impact on the marine environment.

Rationale:

In practice, the Scottish Environment Protection Agency (SEPA) lays down consents for discharges into the sea. However, owing to the importance of the waters surrounding St Kilda, particular care must be taken so that those on shore are aware of the need for vigilance, and also of the contingencies needed in case of an accident. This vigilance is also required of visiting vessels, to ensure that vessel oil spill, discharge of sewage or disposal of food waste from visiting yachts, fishing boats or cruise ships, does not harm the waters around St Kilda. The feasibility of successfully implementing a code of practice to deal with this will be tested in this Plan period.

Prescriptions

20.1 Ensure that polluting substances (organic waste and pollutant chemicals) are not discharged into the surrounding seas and that contingency plans are in place to counteract accidental discharge.

20.2 Develop and implement a code of practice and/or contingency plan to deal with marine contamination from visiting vessels.

Seabirds: breeding colonies

Objective 21

To maintain the populations of internationally important breeding seabirds in favourable condition, as indicated by total numbers and the proportion of the relevant biogeographical population.

Rationale:

Seabird populations fluctuate in response to local events and conditions as well as more widespread factors and St Kilda is a triennial JNCC seabird productivity monitoring site. It is important to monitor seabird numbers both in absolute terms and relative to similar populations elsewhere in order to ensure that the colony does not decline in importance. Predation by the growing colony of great skuas, entanglement in litter, and disturbance of nest sites have all been identified as threats.

Additionally, as a nature reserve and the most important breeding bird colony in the North East Atlantic, there should be a presumption against any human activity that disturbs their breeding activity. Other than essential operational helicopter flights, there should be no other flights allowed around the archipelago owing to the disturbance to seabirds, risks of bird strike, and reduction in the 'wild land' perception. Discussions should be held with the Civil Aviation Authority on how to achieve this. Existing measures agreed with QinetiQ to protect St Kilda from Range activities will be maintained.

Prescriptions

21.1 SNH, JNCC and the Trust to agree the species to monitor and the frequency of monitoring.

21.2 Monitor the populations of breeding seabirds and their breeding success on a regular basis.

21.3 Monitor populations of species susceptible to predation by great skuas to quantify impact of the predation.

21.4 Monitor presence of marine litter to assess the impact of litter on seabirds, particularly entanglement in nets.

21.5 Ensure that breeding seabirds are not disturbed by climbing on the cliffs.

21.6 Ensure that all helicopter flights to St Kilda follow a direct route into and out of the landing pad, and seek to ensure that there is no other flying activity around the archipelago.

Seabirds: loafing and feeding areas

Objective 22

To maintain the resting and feeding areas of the internationally important populations of breeding seabirds in favourable condition.

Rationale:

Seabirds are notoriously vulnerable to oil spills. The most likely source of this is accidental or deliberate discharge from passing vessels, though oil exploration and production activities pose a small risk of spill to feeding areas beyond 70km offshore. On the basis of current geological knowledge it is extremely unlikely that oil or gas is present in amounts that would make production economically viable within a 70km radius of St Kilda. QinetiQ have developed an oil spill response plan for the re-supply operation serving the base and the Western Isles Oil Spill Response Plan covers other threats to the islands, though in less detail. Two measures, Marine Environmental High Risk Areas (MEHRAs) and the Deep Water Route, are designed to keep ships bearing hazardous cargoes away from the archipelago but their efficacy depends on the extent to which they are observed. The development of oil spill contingency plans for vessels visiting St Kilda needs to be addressed. Commercial fishing affects the food available to seabirds both by providing discards, on which several species rely, and potentially by depleting stocks of prey species, such as sandeels. Certain fishing methods may cause incidental mortality of seabirds.

Areas of sea used by seabirds are not currently protected, but the creation of marine SPAs is under consideration. These would incorporate measures to safeguard loafing and feeding areas.

Prescriptions

22.1 Identify areas at sea important for resting and feeding for the breeding seabird populations.

22.2 Ensure oil exploration and production activities beyond 70km offshore do not threaten the populations of seabirds.

22.3 Review adequacy of existing Oil Spill Response/Contingency Plans (i.e. the plan for the Western Isles and the QinetiQ plan for St Kilda), and add to / amend as necessary.

22.4 Establish a MEHRA to protect habitats and enforce appropriate measures.

22.5 Review the adequacy of the Deep Water Route for shipping, and consider the need for alternative navigation control measures.

22.6 Monitor observance of the MEHRA and Deep Water Route.

22.7 Ensure fishing levels do not threaten the populations of breeding seabirds.

22.8 Seek to influence Common Fisheries Policy to ensure fisheries are managed sustainably, and take account of the whole ecosystem.

22.9 Investigate use of damaging fishing methods, particularly fixed nets and long lines, and introduce control measures if necessary.

22.10 Promulgate code of practice for visiting ships and boats to minimise disturbance to breeding and loafing seabirds.

22.11 Engage in discussions with all relevant authorities to ensure that necessary controls are put in place to prevent adverse impacts on seabirds, including from activities outwith the boundaries of the SPA.

Littoral and benthic habitats

Objective 23

To maintain the internationally important shoreline and underwater habitats in favourable condition.

Rationale:

It is a requirement of the Habitats Directive that populations of typical reef species, such as crabs and lobsters, should be maintained in favourable condition. Inappropriate fishing methods, particularly mobile gear, could cause damage to fragile sessile organisms. There is a growing number of divers visiting the archipelago who could potentially cause deliberate or accidental damage to reef communities. Divers also add to our knowledge of the underwater habitats and a code of conduct for divers would help ensure that safe and responsible diving also contributes to our understanding of the seabed.

Prescriptions

23.1 Monitor on a 6-yearly cycle the qualifying features of the marine Special Area of Conservation.

23.2 Ensure fishing methods that damage the seabed are not used within the SAC.

23.3 Promote a code of conduct for divers to ensure nothing is removed or disturbed on the seabed.

23.4 Monitor the current impact of fishing for crustacea within the SAC and ensure that populations are maintained in favourable condition.

Biological Research and Survey [terrestrial and marine]

Objective 24

To ensure any research undertaken is in accordance with Natura and NNR objectives.

Rationale:

Any research programme needs to give a positive answer to the question "Does this research have to be done on St Kilda?" [See also Guiding Principle 8 in the Vision Statement.] It should also contribute to our understanding and appreciation of the site.

Prescriptions

24.1 Research projects on all subjects (including archaeology – see 8.2) require written permission from the Trust, and should be covered by licences where relevant, (e.g. Home Office, SNH).

24.2 Ensure the results of any research undertaken are fed back to the Trust, SNH and others.

Objective 25

To ensure that biological information for St Kilda is collected, managed and collated in a consistent manner.

Rationale:

With a lot of biological and ecological information generated by research and survey work on St Kilda, we need to ensure that it is consistently collected, organised, written-up and easily available. This will improve our ability to synthesise and understand the information, and to share it with others.

Prescriptions

25.1 Discuss with SNH survey and monitoring priorities for the NNR.

25.2 Produce an agreed annual programme of biological monitoring.

25.3 Agree protocols on the collection, storage and promulgation of any biological information gained from the archipelago.

Enjoyment and Education

THE VISITOR

Access

Objective 26

To enable access to St Kilda while taking any steps required to minimise the impact of visitors on the natural and cultural heritage of the islands.

Rationale:

The natural and cultural heritage of the islands is of extremely high quality. We should continue to allow open access to St Kilda but, in so doing, ensure that visitors do not pose a threat to the heritage. Visitor numbers and visitor behaviour, particularly as regards recreational use, should therefore continue to be monitored. St Kilda can be a dangerous place – visitors should be made fully aware of potential risks to their health and safety and thereby participate from a position of informed consent.

An increasing number of visitors arrive on cruise ships and it is important to continually review the impact this has on both the natural and cultural features of the property and on the logistics of management.

St Kilda's sea cliffs are the highest in the UK and thus offer an attractive challenge to modern day climbers. However, climbing on the sea stacs and cliffs causes disturbance to nesting seabirds and for that reason special permission is required from the Trust and SNH under the terms of the St Kilda bylaws. In order to establish a clearer position on climbing on St Kilda, the subject needs to be addressed against the wider context of a Trust policy on both climbing on sea cliffs and access to islands in general. There will be issues that are specific to St Kilda, but these will best be addressed in the context of an overall policy. The Trust will therefore work with MCoS and SNH and others to review the Trust's position as regards climbing on sea cliffs and access to islands; and as part of this exercise agree a position once the impact of climbing on the cultural and natural heritage has been properly assessed. The use of the small camping area in Village Bay is welcomed by the Trust but as the facilities in Village Bay are limited, the numbers using this area must be monitored via the booking system.

The jetty suffered considerable damage during the storms of winter 2001/2, and the jetty itself may be creating coastal erosion problems; the need for and the size of the jetty may be reviewed in the light of the results of studies of coastal erosion.

The toilet facilities (technically not open to the public) and the shop are within the MoD base, and the shop is manned by Work Party volunteers. The operation of these facilities needs to be reviewed to ensure that visitors are offered appropriate, sustainable facilities, with minimum impact on the day-to-day operations of the base.

Prescriptions

26.1 Ensure the Ranger / Warden continues to welcome visitors to St Kilda, and briefs them on safety measures for access and on the Code of Conduct.

26.2 Develop and implement guidelines for handling missing persons incidents.

26.3 Monitor the numbers of visitors arriving on cruise ships and develop plans to manage these if it becomes necessary.

26.4 Develop a policy on climbing on St Kilda that ensures rock climbing does not in any way interfere with breeding seabirds, vegetated sea cliffs or wild land quality.

26.5 Continue to provide for camping in the designated area within Village Bay (with prior permission from the Trust) and keeping provision of toilet and waste disposal facilities under review.

26.6 The Ranger and Archaeologist will continue to monitor visitor numbers and impacts and ensure that sensitive areas are protected from visitor pressures when appropriate.

26.7 Carry out a Risk Assessment of visitor activity on St Kilda and implement its recommendations.

26.8 Review the needs and layout of the jetty, following the results of the coastal erosion survey [see

prescription 9.6].

26.9 Undertake an access audit for people with disabilities.

26.10 The Trust and QinetiQ will review the existing visitor facilities (toilet provision, shop) - both their location and how they are managed – and implement new proposals.

Interpretation

Objective 27

To provide appropriate orientation, interpretation and educational material for St Kilda to promote a greater understanding and appreciation of the island and the importance of sustainable conservation management.

Rationale:

An Interpretive Plan, looking at all aspects of interpretation on the island (including the museum, the current orientation display, and leaflet provision) will result in initiatives that will enable visitors to gain a greater understanding and appreciation of the island, and the importance of sustainable conservation management.

Gaelic language and culture, the sheep research, the MOD presence, the cultural and natural heritage (including geology), WHS status – all should be included in the interpretation, giving the public as full a picture as possible about the importance of St Kilda and the rationale for management of the NNR and World Heritage Site. All interpretation about St Kilda on the Western Isles should be bilingual (Gaelic and English).

The website (www.kilda.org.uk) should be seen as the main location for public information pertaining to St Kilda, and as the first source for information on how to travel there. It is essential that the website is kept up-to-date, with the necessary expertise and finance to maintain it.

St Kilda has the potential to link into a wide range of subjects for formal education, amongst all age ranges, building on more readily available information about research programmes on the islands. Such links would bring benefits both to students and to St Kilda – offering an opportunity to fulfil the Vision for St Kilda as a model for environmental education.

Education and interpretation initiatives, developed in conjunction with existing non-Trust services – including the services offered by the Comhairle Nan Eilean Siar and by voluntary services - will be used to foster improved links between St Kilda and the people of the Western Isles.

Prescriptions

27.1 Produce and implement an Interpretive Plan for St Kilda that will not impact adversely on the cultural or natural heritage or on the emotional atmosphere of St Kilda.

27.2 Ensure that the website gives up-to-date information for those wishing to visit the island, e.g. travel contacts, necessary permissions.

27.3 Continually update and expand the website, e.g. use of Gaelic, adding current news, annual reports, information from partners.

27.4 Publicise the website, so that it is widely recognised as the initial point of contact for those wishing to gain information on any aspect of St Kilda.

27.5 Exploit the vast opportunities for links with formal education, particularly on the Western Isles.

Influence and Persuasion

Conservation designations

Objective 28

To seek to extend the World Heritage Site designation to include the cultural landscape and the surrounding seas.

Rationale:

The importance of St Kilda is such that it deserves the highest international accolade, recognising the importance of its natural features, its cultural landscape, and of the surrounding seas. Although the original WHS nomination included both the cultural and natural aspects, in the event only the natural heritage was included in the designation, with the decision on the cultural aspect being deferred.

Additionally, in recent years the surrounding waters have been found to be of outstanding conservation value, and it has also been recognised that it is important to conserve the seabird feeding and resting areas as well as the breeding sites. UNESCO has requested that the WHS be extended into the surrounding seas.

To achieve inscription as a World Heritage Site for all three aspects of the archipelago is of great significance to the Trust – reflecting the integrated approach to management at which the Trust excels.

Prescriptions

28.1 Continue the process of the nomination for St Kilda's cultural landscape and marine environment to be included in the World Heritage Site designation.

Objective 29

To ensure the internationally important features of the seas surrounding St Kilda are protected through European legislation.

Rationale:

Most of the protected area designations for St Kilda do not extend below mean low water mark. A recent sonar survey has shown that the existing marine Special Area of Conservation (SAC) does not include all of the qualifying habitats surrounding the archipelago. The internationally important seabird colony depends on the sea, both for resting areas around the breeding sites and for feeding. Some of the bird species, especially the petrels, feed at considerable distances from the colony. Establishment of an offshore Special Protection Area (SPA) around these sites would enable them to be managed for the benefit of the birds that feed in them.

The extension of the Natura designations will be carried out through partnership working between the Trust, SNH, JNCC and the Scottish Executive.

Prescriptions

29.1 Extend the Special Area of Conservation boundary to include all the qualifying habitats around the archipelago.

29.2 Extend the Special Protection Area boundary beyond the low water mark to include the loafing/resting areas of the seabirds.

29.3 Investigate the possibility of creating offshore SPAs to protect seabird feeding areas.

Publicity

Objective 30

To foster interest in the St Kilda archipelago.

Rationale:

St Kilda is held dear in the hearts and minds of many people throughout Scotland, and further afield, and the Trust and its partners must be aware of how their interests can be embraced. The St Kilda Club provides an ongoing link with hundreds of people who have visited the islands, many of them Work Party volunteers. In the Western Isles in particular, we should build on the consultations carried out in the development of this Management Plan and establish regular liaison with residents, seeking to increase their access to information and interpretation about the property. The appointment of an Area Manager for the Western Isles will provide a direct link between the Trust and the people living in this area.

Prescriptions

30.1 Continue to work with the St Kilda Club to share knowledge and experiences of the archipelago.

30.2 Investigate linking with other interpretation/education professionals on the Western Isles e.g. the local authority Museums Service, the Comainn Eachdraidh (the local voluntary historical societies of the Western Isles) and Ranger Services.

30.3 Investigate the need, feasibility and location of interpretive facilities for St Kilda elsewhere in Scotland, e.g., Western Isles, Oban, Trust Head Office, and in partnership with other organisations.

30.4 Holding regular events on St Kilda issues on the Western Isles to facilitate effective community liaison.

30.5 Regularly input to local newspapers on the Western Isles.

30.6 Ensure St Kilda is kept in the public eye through appropriate press releases and contacts with the media. [See also 27.4]

Organisation and Resources

ORGANISATION

Liaison

Objective 31

To ensure Trust staff maintain an overview of the islands and liaise with partners and stakeholders as appropriate.

Rationale:

It is essential that there is regular communication between all parties involved in both the strategic planning and the day-to-day management of St Kilda. With the Trust taking direct management of the site in hand, it is seeking to work in partnership with others to deliver the joint objectives in this Management Plan. The management arrangements for this partnership approach are described in detail in the Management Framework section.

Prescriptions

31.1 The Trust will liaise with SNH, Historic Scotland, Comhairle nan Eilean Siar and the MOD (and their agents) through an annual strategic planning meeting, where plans for the year ahead will be agreed.

31.2 The Trust will ensure that regular operational meetings take place between it and appropriate local staff of SNH, Historic Scotland and the MOD (and their agents).

31.3 Establish frequent liaison with researchers who work on St Kilda on a regular basis (e.g. sheep researchers).

Staffing

Objective 32

To ensure that this internationally important property is managed to the highest standards.

Rationale:

In 2003, the Trust will be resuming the lease of the archipelago from SNH. It is essential that management resources are employed to ensure the island is managed to a standard that meets the obligations of its national and international designations. The Trust will manage the property in an integrated way and effectively act as the champion for its World Heritage status. The appointment of an Area Manager for the Western Isles will enable the smooth operation of the day-to-day management of St Kilda.

Additionally, it is not possible to carry out all the archaeological work that the archipelago warrants with a purely seasonal post. A full-time post is needed to provide the Trust and HS with monitoring information, to continue to enhance the SMR for St Kilda, to undertake research, to produce reports on aspects of the management on St Kilda (including coastal erosion detailed in 3.1), to give technical and logistical support to Work Party Leaders, and to assist with visitor management.

Prescriptions

32.1 Create the post of a Trust Area Manager based in the Western Isles.

32.2 Upgrade the St Kilda Archaeologist post from seasonal to full-time.

32.3 Continue to employ a seasonal Ranger (Warden), and review the length of contract.

Objective 33

To continue to organise and run a series of Work Parties to St Kilda.

Rationale:

An important role in the Trust's management of St Kilda is to organise a series of Work Parties to the islands each year. Although the main aim of these to carry out essential work within the cultural landscape (and to achieve this to the highest conservation standards), in effect they provide the only opportunity for those interested in St Kilda to live on the Hirta, for a relatively short time.

Prescriptions

33.1 Ensure that Work Parties continue to carry out essential work identified in the Management Agreement with Historic Scotland.

33.2 Consider whether the work carried out by the Work Parties can be broadened in the future to include other disciplines of work and implement as appropriate.

33.3 Ensure that Work Party leaders are given adequate training to support their role – both in terms of leading their group and delivering high quality conservation work.

Objective 34

To ensure that all those working on, and visiting, St Kilda have the necessary induction and training.

Rationale:

St Kilda is a remote environment, and safe working practices must be given priority. Additionally, those working on St Kilda must be aware of the constraints on working practices needed to ensure conservation of its natural and cultural heritage features.

Codes of Conduct, Bylaws, and Contingency Plans need to be developed and kept up-to-date. A review of the Bylaws, particularly in the light of new legislation regarding access to open countryside, is proposed. These include guidance for all those visiting the islands (staff, volunteers, contractors, visitors, cruise ships, divers, campers and potentially climbers); those carrying out work on the island (e.g. construction, repair, ground disturbance, sheep research); and contingency plans for rat eradication and pollution control.

Prescriptions

34.1 Ensure that there is a full induction programme in place for all new staff, volunteers, and contractors, including Codes of Conduct, and Health and Safety issues.

34.2 Ensure that the necessary Codes of Conduct, Bylaws, and Contigency Plans are in place; that they are kept up-to-date; and promulgated to those who need to know them.

Logistics

Objective 35

To ensure adequate logistical support for those involved in the management of the archipelago.

Rationale:

Suitable accommodation must be available to visiting staff and specialists, so that the necessary management and research on St Kilda can be undertaken. At present the Ranger/Warden lives in the Factor's house on the island, while the Archaeologist is accommodated by the MoD/QinetiQ. If Trust staff accommodation is changed to the Manse, the Factor's House could be used as accommodation for visiting staff and specialists. As the Manse is very near to the pier, this would allow for easier visitor management.

Additionally, for staff and specialists visiting the islands, there need to be clear protocols for booking accommodation and transport, which the Trust will prepare in association with Historic Scotland, SNH and the MoD (and their agents).

Prescriptions

35.1 The Trust will review the travel and accommodation requirements of both resident staff, visiting staff and specialists, and agree a protocol for booking accommodation with QinetiQ.

35.2 The Trust will work with the MoD to resume the Manse for Trust use.

Post-MoD occupancy

Objective 36

To ensure the Trust has a plan in place in the event of the MoD leaving St Kilda.

Rationale:

Although the presence of the MoD base on St Kilda appears assured at present, the Trust must be prepared for the eventuality of its closure. This is an objective outstanding from previous Management Plans and must now be addressed. This review should embrace the buildings needed for future management of the islands, the replication and financing of services currently provided by the MoD and QinetiQ (including electrical power) and the costs and logistics of the work involved, in the wake of the MoD's exit, to remove redundant structures and restore the landscape. Restoration of a decommissioned area on Mullach Sgar during the period of this Plan would be a useful pilot project. The experience of this work would inform approaches to the restoration of part or all of the site. The review should also clarify whether a permanent year-round presence should be maintained and investigate issues of staffing levels, staff safety and costs to achieve the level of presence desired. There should be a full assessment of both the significance of the MoD buildings as part of the islands' military history and also the options for re-use of the existing buildings by staff or visiting researchers, before decisions about use or removal are made.

Prescriptions

36.1 Assess which MoD buildings might be needed for the management of the island if the MoD pulled-out.

36.2 Develop a contingency plan for post-MoD occupation and for management of the archipelago.

36.3 As a pilot scheme, restore the area on the slopes of Mullach Sgar (now decommissioned by the MoD).

Finance

Objective 37

To ensure there are adequate financial sources available to manage St Kilda to World Heritage standards.

Rationale:

St Kilda is seen as important by a wide community of interests, and the Trust must make every effort to raise money through a wide-ranging Appeal, both to the public and to national and international organisations and public bodies. Currently the endowment for the property is not adequate to manage the island to the standard it deserves.

As the Trust resumes the lease of the archipelago from SNH, a Minute of Agreement must be negotiated, probably under the planned Trust/SNH national concordat.

The importance of financial support from Historic Scotland through a Management Agreement has been fundamental in the development of positive monitoring and maintenance regimes on St Kilda.

Prescriptions

37.1 Plan and launch a high profile Appeal for funds, as the start of the process of building an adequate endowment for the property.

37.2 Negotiate with SNH for funding to assist with management of the natural heritage features of St Kilda and continue regular negotiations with Historic Scotland for funding to assist with the management of the archipelago's cultural features.

PART FOUR

MANAGEMENT FRAMEWORK

1. Ownership

1.1 The National Trust for Scotland (the Trust) owns the archipelago of St Kilda. The islands were bequeathed to the Trust by their previous owner, the 5th Marquess of Bute, and passed into Trust ownership on his death in 1957. The Trust has barony title to the foreshore, i.e. the area between mean high and low water marks.

1.2 The sea bed and the mineral rights from the mean low water mark out to 12 nautical miles are the property of the Crown. The sea itself is a commons through which there is free right of passage.

2. Tenure

2.1 Superiority

There is no reference to the identity of the feudal superior of St Kilda in the disposition by the Marquess of Bute to the Trust, nor does the Trust pay feu duty to anyone. The last reference to a feudal superior of the islands was made in the Ordnance Gazetteer of Scotland Vol. VI (1885), where the Isles of St Kilda are referred to as being part of the Lands of Ardnamurchan of Lewis and of the barony of Dunvegan. Lord Dunmore, proprietor of Harris, was referred to as 'the feudal superior of the island and is entitled to receive an annual feu duty of 1 shilling' (Trust Archives, 1968). It has been mentioned to the Trust, however, (Mary Harman, personal communication) that a sum of 6/- feu duty was paid in 1931, at the time of the sale of the islands to the Earl of Dumfries. It is not known to whom this sum was paid.

2.2 Inalienability

St Kilda was declared inalienable by the Trust on its acquisition of the islands in 1957.

3. Management since 1957

3.1 A **linear management relationship** was established between the Trust, the Nature Conservancy Council for Scotland (now SNH) and the Air Ministry (now MoD) for nearly 50 years. The three organisations liaise informally at the local level and meet at an annual Tripartite meeting, to review the previous year's activities and plan for the year ahead.

3.2 Through this arrangement, **staff** were appointed as follows. The Trust has appointed a seasonal (6 month) Warden each year (fully funded by SNH) and since 1996 the Trust has had a St Kilda Archaeologist for at least 6 months of the year, grant-aided by Historic Scotland. These on-site staff have been supported by the Trust's Deputy Director (South) for the Highlands and Islands Region, based in Oban (line manager for the Archaeologist) and by SNH's Area Officer for the Uists, Barra and St Kilda – based on South Uist (line manager for the Warden). The Trust also employed a St Kilda Work Party Co-ordinator to manage the Work Party programme and provide additional support to the Warden and Archaeologist.

4. Future management

4.1 Trust Management

In 2003 the Trust will take the management of the St Kilda NNR in-hand from SNH as an "Approved Body". [See Appendix K for Minute of Agreement to support this.] The recently formed integrated team of conservation professionals in the Trust's Highland and Islands Region will support the line management of the property and means that the Trust now has the expertise in the Region to take on the direct management of the islands' natural heritage. The existing lease arrangements will be replaced by one new 25-year lease currently being negotiated between the Trust and the MoD. The lease negotiations will agree the approach for payment of exit works should the MoD withdraw from St Kilda as well as future rental value. The lease is being agreed on the basis of a series of Management Principles to guide activities on St Kilda [see Appendix C]. The Trust will therefore, from 1 March 2003, assume full managerial control of all aspects of the island – including the management of the NNR and of the MoD's activities on the islands. It will remain a condition of the lease that obligations / agreements therein will apply equally to the MoD and any of its contractors, including QinetiQ.

However, the partnership approach developed over the last 45 years will remain in place and the Trust will work closely with SNH, the MoD and with Historic Scotland in particular. The existing Tripartite group will be restructured, as explained in section 4.4 below. The Trust is committed to working with partner organisations to achieve sympathetic integrated management of all interests at St Kilda, with a clear priority given to conservation.

4.2 Trust Staffing

Trust proposals are to **appoint a full time permanent Area Manager for the Western Isles** to provide line management and support to the St Kilda Ranger (previously titled St Kilda Warden) and St Kilda Archaeologist. This post, itself line managed by the Trust's Conservation Manager for Highlands and Islands, will be responsible for the day to day management of St Kilda. The Area Manager, based on Benbecula and spending a proportion of time on St Kilda, will also be responsible for co-ordinating the delivery of education and community liaison activities for the Trust on the Western Isles to foster continued appreciation and understanding of St Kilda.

As an Area Manager, the post will also be responsible for supporting the Trust's other properties on the Western Isles (i.e. Mingulay, Berneray and Pabbay, and Calanais Blackhouse). This accords with the Trust's new approach to grouping properties in areas to encourage co-ordination and support networks.

In summary, the Area Manager's role will be to:

- lead on the operational management of St Kilda
- manage the implementation of the MoD lease
- be the first point of contact within the Trust for all inquiries relating to St Kilda
- co-ordinate the logistics of visiting staff, contractors, volunteers and others
- work with the Conservation Manager on strategic management issues
- support and line manage the on-site Trust staff on St Kilda
- deputise for St Kilda Ranger during periods of annual leave
- lead on liaison with St Kilda Partners
- take overall responsibility for the St Kilda Work Parties

- support management of Mingulay, Berneray and Pabbay and of Calanais Blackhouse *[the Southern Isles Amenity Trust employ a Ranger based on Barra and the Trust is considering funding additional hours to support the Area Manager on-site]*
- co-ordinate the Trust's education, interpretation and research programmes
- establish and maintain community liaison with people on the Western Isles

The existing post of St Kilda Warden will be embraced by the Trust's Countryside Management Strategy and associated funding package agreed with SNH, and re-named **St Kilda Ranger** to match other posts. The Ranger's duties will continue to include wildlife monitoring, welcoming visitors and on-site liaison with QinetiQ. The Trust intends to review the length of the Ranger's contract, potentially to increase from 6 months to 8 months or to permanent year-round full time. The latter would ensure that the Ranger is also able to spend time on the Western Isles liaising with communities there and with Trust and SNH staff.

The existing post of **St Kilda Archaeologist** will be upgraded from seasonal to permanent full time. The Archaeologist's duties will continue to include archaeological monitoring, welcoming visitors and supporting the Work Parties. The post will continue to be covered by the Trust's Management Agreement with Historic Scotland. A full time post will allow time to undertake and facilitate research and produce reports on aspects of the archaeological management of St Kilda. In recent years, this has been achieved through one-off contract extensions. This would see the St Kilda Archaeologist spending part of the year on the island and part on the Western Isles or on the mainland.

Both the Ranger and the Archaeologist would receive professional guidance from staff in the Trust's Highlands & Islands Region and at Head Office, particularly from the Regional Countryside Manager and Regional Archaeologist.

4.3 St Kilda Work Parties

The Area Manager for the Western Isles will have overall responsibility for the St Kilda Work Parties. The work party programme will continue to be developed by the Trust's Building Surveyor and Archaeologist in the Highlands & Islands Region and commented upon and approved by Historic Scotland. **The work parties will be organised by the Trust's Head Office Conservation Volunteers Team** who will be responsible for publicising the work parties and arranging logistical and health and safety support alongside their existing programme of Thistle Camp working holidays. The Regional Building Surveyor and the St Kilda Archaeologist are responsible for ensuring implementation of the programme.

4.4 Partnership

The Trust will take the lead in managing St Kilda, drawing on the support of its main partners – Historic Scotland, SNH and the MoD and its agents QinetiQ. The existing Tripartite Meeting will be replaced with **two management groups - Strategic and Operational**.

The **Strategic Management Group** will meet once a year, in Benbecula. It will be chaired by the Trust's Regional Conservation Manager, with the Area Manager for the Western Isles attending and other specialist Trust staff present as appropriate. The Group's core membership will be the Trust, SNH, HS, MoD and Comhairle nan Eilean Siar. Representatives of other organisations will be invited to attend as appropriate. The Group's meeting will be timed to take an overview of the annual workplans for St Kilda (therefore probably held in July). The Group will recommend policies for St Kilda and regularly review the St Kilda Management Plan to agree any changes necessary as well as the rolling operational elements of the Plan.

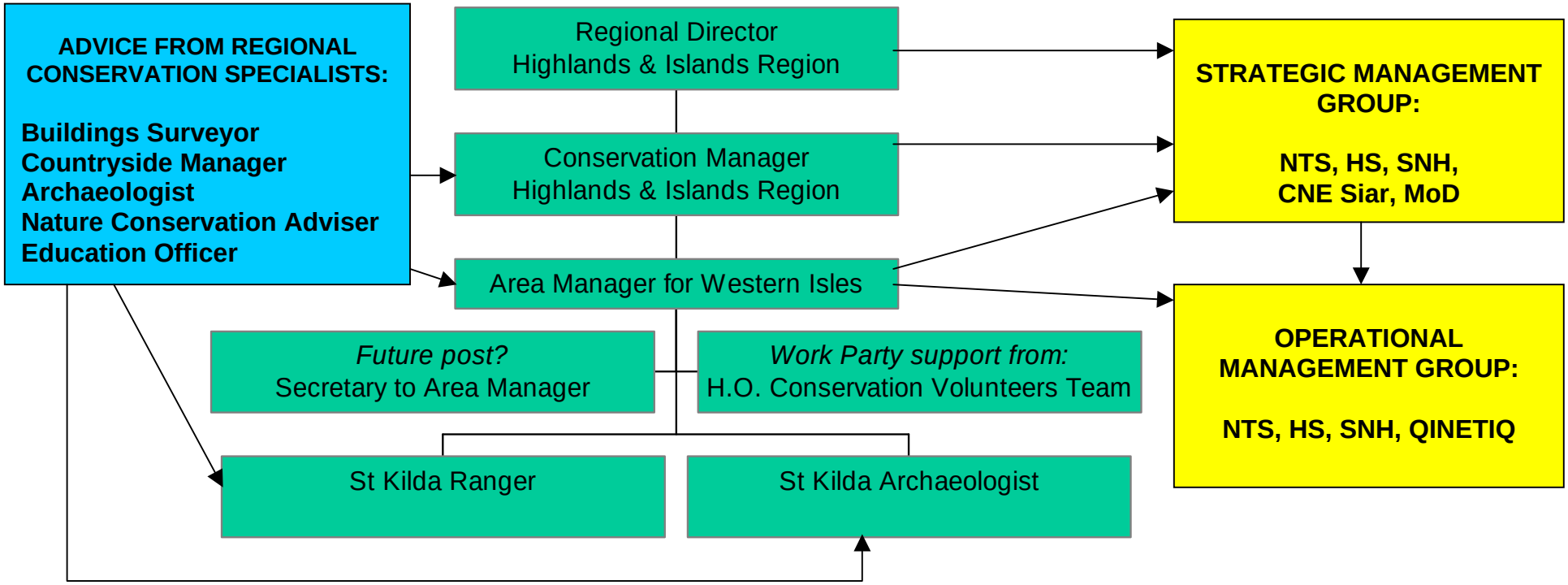
The **Operational Management Group** will deal with the implementation of the policy and plans agreed through the Strategic Management Group. It will be chaired by the Trust's Area Manager for the Western Isles and its core membership will be the Trust, SNH, HS and QinetiQ. The Group will meet 3 times a year – probably August (immediately after Strategic Management Group meets, to plan budgets etc), December (to plan implementation) and April (to monitor mid-year progress in delivery). Through this Group, each year's annual operational action/work plan for St Kilda will be approved, embracing actions planned by each member organisation. These will be approved on a rolling cycle a year in advance of operation – given the short window of time available to carry out work on the islands it is essential to plan this far ahead.

These arrangements will be supported by ongoing informal liaison between staff at the local level to ensure effective implementation of this Management Plan. Ownership and management by the Trust guarantees that St Kilda will be managed for conservation and the Trust will work closely with its Partners to ensure that other considerations – such as visitor access and the operational effectiveness of the base – are managed effectively and without detriment to the cultural and natural features of the islands.

The Area Manager will be responsible for liaising with other Trust staff and with Partners to develop and implement annual workplans and budgets for the delivery of this Management Plan.

The diagram on the next page illustrates these arrangements.

PROPOSED MANAGEMENT OF ST KILDA FROM 1 MARCH 2003



4.5 Role of Scottish Natural Heritage

SNH will maintain a regulatory and advisory role, fulfilling its duty to monitor the management of the islands in respect of their natural heritage conservation designations, particularly the NNR and Natura interests. Informal liaison will also ensure that their experience of managing St Kilda for over four decades is not lost to the Trust.

4.6 Role of Historic Scotland

Historic Scotland will maintain its regulatory and advisory role, ensuring that the management of St Kilda's built heritage is undertaken as agreed, and to fulfill the requirements of SAM legislation.

4.6 Role of MoD / QinetiQ

The presence of the Army and now QinetiQ employees has given St Kilda a living community since the 1950s. The presence of the base on St Kilda greatly facilitates the conservation on the islands. The assistance they provide can be divided into four categories.

a) Communications

This is one of the most important services provided. It includes transport of materials, supplies and personnel; and radio and telephone contact with the mainland.

b) Infrastructure

The base provides electricity, connection to the sewerage system and hot and cold running water, supplied by their generating station, sewerage systems and water systems respectively. They have also provided electrical and plumbing expertise when this has been lacking.

c) Security

The staff on the base 'police' the island of Hirta during the months when the warden or Trust Work Parties are not in residence. It is likely that without this activity or their presence on the island throughout the year, vandalism would take place, as was the case from 1930-57 when Hirta was unoccupied.

d) Ancillary Services

This covers many areas, from providing medical facilities to making available the use of the pub (the 'Puffinn') and the shop, both of which are situated within the base compound.

4.7 The Future of the Base

The future of the base on St Kilda is dependent on the continued operation of QinetiQ Range Hebrides. The MoD is currently confident of the continuing success of the Range as an international test and evaluation facility, although the importance of the radar on Hirta to the operation could diminish in the future as tracking technologies advance.

Without the base and its ancillary services, management of the islands for conservation would be very difficult and require significant changes to current working practices and funding arrangements. During the lifetime of this Plan, it is a priority to scope the impact of MoD departure on the management of the site.

5. Planning Framework

5.1 Comhairle nan Eilean Siar

The Comhairle is the Scottish local authority with statutory responsibilities for the St Kilda archipelago. As such it has responsibilities for, and interests in, planning, environment protection, waste, archaeology, education, oil spill response, tanker traffic, hydrocarbon exploration, fishing and alternative energy generation. The Comhairle will therefore be an important stakeholder in the Strategic Management Group for managing St Kilda, bringing to it a wealth of pertinent knowledge and a broad spectrum of interests relevant to the long term sustainable management of the islands.

5.2 Western Isles Structure Plan

The Western Isles Structure Plan is now being prepared by the Comhairle for submission to Scottish Ministers for their approval (2002). The Structure Plan focuses on developing a land use strategy for sustaining the communities of the Western Isles. A number of policies contained in the Plan have a bearing on St Kilda, particularly in relation to the protection of the environment:

POLICY SC8 – CULTURAL HERITAGE:

In conjunction with its Community Planning partners, the Comhairle will seek land use and development solutions that sustain and enhance the cultural traditions and heritage of the islands, including Gaelic language and the historic environment, by respecting local cultural circumstances (such as building design, settlement pattern, and promoting the use of bilingual signs.

POLICY RM6 – COASTAL ZONE MANAGEMENT AND THE MANAGEMENT OF MARINE RESOURCES

The Comhairle, along with other Partners, will prepare a Coastal Zone Management Plan to promote sustainable management of coastal and marine resources. The Plan will consider measures for enhancing these resources and for their protection against inappropriate development.

POLICY RM9 – INTERNATIONAL NATURAL HERITAGE DESIGNATIONS

The Comhairle will only permit development which would have an adverse effect on the conservation interest for sites proposed or designated under the Natura 2000 network (SAC or SPA) or Ramsar where:

i) there is no alternative solution

ii) there are imperative reasons of over-riding public interest (including those of a social or economic nature)

POLICY RM18 – SCHEDULED ANCIENT MONUMENTS AND OTHER ARCHAEOLOGIVAL SITES

The Comhairle will support proposals that seek to protect, enhance and interpret SAMs and other archaeological sites. Development proposals affecting nationally important remains (whether scheduled or not) and their settings will not normally be permitted.

5.2 Harris Local Plan.

Despite the close working connection of St Kilda with the Uists and Benbecula, the islands are included in the planning area of Harris, by virtue of their inclusion in the parish of Harris. The Finalised Harris Local Plan (Jan 2000) is now being prepared for Adoption by the Comhairle Nan Eilean Siar. Two policies in the Plan have direct reference to St Kilda:

POLICY: ENVIRONMENT 5 - ST KILDA

The Comhairle will not permit development which would have an adverse affect on any of the international or national environmental designations afforded to St Kilda. An Environmental Impact Assessment will be required for any proposal that may adversely affect St Kilda. SNH will be consulted on development proposals.

Reasoned Justification:

1. St Kilda is a World Heritage site and Biosphere Reserve, SPA, candidate SAC, candidate marine SAC, NNR, SSSI, NSA and Marine Consultation Area. Six scheduled ancient monuments are located on the islands.
2. The islands have an extremely rich natural and built heritage which it is important to protect from inappropriate development that might harm this unique and fragile environment.
3. The National Trust for Scotland owns the islands and leases them to SNH. Conservation of the natural and built heritage is a primary objective of the bodies and development and activities are strictly controlled.
4. The Ministry of Defence has a significant presence. The Comhairle is consulted on development proposals under the "Notice of Proposed Development" (Circular 21/84).

POLICY: ENVIRONMENT 11 - MARINE CONSULTATION AREAS

The Comhairle will consult with SNH and will normally resist development likely to have a significant detrimental impact on Marine Consultation Areas.

Reasoned Justification:

1. The marine coastal areas around St Kilda, the Sound of Harris and Loch Seaforth have been identified as deserving particular distinction and protection in respect of the quality and sensitivity of their marine environment and conservation importance.
2. The designating authority for MCAs is SNH. The Comhairle is statutorily required to consult SNH on development proposals likely to have a significant detrimental effect on MCAs.

6. Trust Requirements

6.1 At a meeting of the Trust's Executive Committee on 17th April 1986, it was agreed that all development proposals affecting St Kilda should be submitted to the Executive Committee for discussion. When an issue is considered to be of sufficient importance, it should be referred by Executive Committee to the Trust's Council for consideration. The Trust's Council has also requested that the Trust Management Plans for St Kilda are presented to Council.

7. Planning Issues

7.1 Oil Spill

The most likely source of oil spill near to St Kilda is from passing tanker traffic, from a vessel wreck on the islands or during refuelling operations at the MoD facility on Hirta. Of these, MoD refuelling operations bring a regular planned movement of oil from ship to shore at St Kilda. The potential risk arising from this is combatted by QinetiQ's Ship to Shore Oil Spill Response Plan for this exercise, backed up by staff training. The Response Plan is subject to an annual review at the end of each re-supply season, taking on board comments from regulatory bodies.

A large oil spill in the vicinity could have a catastrophic effect on the natural heritage of St Kilda. At greatest risk would be the internationally important seabird populations, which would be seriously affected by oil floating on water in feeding, resting or loafing areas. The potential negative impact on other marine life is thought to be less, as the intertidal communities are very exposed with sparse flora and fauna. Any oil stranded on the shore would be likely to be washed off very rapidly by natural forces. The high wave energy could result in oil being carried deeper into the water column where effects on the subtidal communities are less well known. In extreme conditions, windborne oil could pose a threat to the cultural heritage of the islands and advice is available from Historic Scotland on dealing with this. It is a priority aim of the Management Plan to protect St Kilda from any potential threat, including oil spill.

7.2 Tanker Traffic

A wide range of marine traffic uses navigation routes through Hebridean waters. These include tankers and cargo ships with destinations within and outwith the region, cruise ships and yachts, military vessels and fishing boats (Bryan 1994). The majority of this traffic travels through the more protected waters of the Minches. However following the *Braer* disaster in 1993, the Donaldson Report *Safer Ships, Cleaner Seas* recommended that loaded tankers over 10,000 Gross Registered Tonnage (GRT) and other large vessels carrying significant quantities of bunker oil should use the Deep Water Route (DWR) to the west of the Hebrides. [See Figure 12.]

A Deep Water Route is a route within defined limits which has been accurately surveyed for obstructions to a specified depth. There are only two such routes in Britain and the DWR in the Hebrides is the only one that has been designated for environmental reasons. It was established in 1987 to try to reduce tanker traffic through the Minch, to minimise the risk of an accident and thus significant environmental pollution. It was approved by the International Maritime Organisation (IMO) in 1987 and is marked on charts. Notices were issued at this time to the Masters of the tankers leaving Sullom Voe advising them to use the DWR, weather conditions permitting.

The Donaldson Report recognised that there are financial and operational disadvantages for owners of tankers in taking the route through the DWR as the passage is likely to take several hours longer. However, the Report stated that such disadvantages should be disregarded in the interests of the environment and the recommendation read:

> *'...the Masters of large and potentially polluting ships should use the DWR as a matter of routine. All large vessels should do so; we recognise that this will make it possible for vessels to meet head on in the DWR, with a small risk of collisions, but we believe that the DWR is wide enough and traffic sparse enough, for the risk to be very small' (Donaldson 1994. 14.59)*

Donaldson included one reservation to this. It was recognised that the rougher seas and stronger winds in the open Atlantic would put greater stress on both a vessel and her crew and so Masters of all large vessels should retain the option of using the Minch in severe weather. Suggestions that the DWR should be removed to the west of St Kilda, to protect the western coastline of the Hebrides, were rejected by the Report for practical reasons, as such a route would prove even more costly and was thus far more likely to be ignored by ship's Masters. Nevertheless, this option is reported to be under review again in 2002.

The importance of St Kilda and the need to protect it from risk of pollution was highlighted by the Trust and recognised by Lord Donaldson, but any formal protection of the islands was rejected on the grounds that they are relatively isolated from the major tanker routes:

> *'It (St Kilda) clearly merits as much protection as the Minch... but while St Kilda and the Flannan Isles deserve protection, they may not need it because of their remoteness. We recommend that ships proceeding to the west of the main chain of the Western Isles and on courses west of Ireland should be advised to keep well to the seaward of the Flannan Isles and St Kilda in bad weather. This advice should be printed on charts' (Donaldson 1994. 14.55)*

The Donaldson Report also recommended the establishment of Marine Environmental High Risk Areas (MEHRAs) - defined as comparatively limited areas of high environmental sensitivity which were also at risk from shipping. It was hoped that ship owners and insurers would regard a MEHRA as an area from which their ship would keep well clear. The Report, however, specified that such a designation should not be given to areas at no real threat from shipping. St Kilda was not considered for selection because 'as far as we know, very few ships go anywhere near it' (Donaldson 1994. 14.126). If a MEHRA was to be established at St Kilda, it is thought that its area would be no larger than the boundary of the existing SAC designation.

If all the recommendations of the report relating to St Kilda, and especially those relating to the DWR, are followed, it would mean an increased amount of laden tanker traffic passing through the DWR to the east of St Kilda. With this, it is assumed, will come an increased risk of incidents which may cause pollution, from either grounding of tankers on or close to the islands, or an oil spill which would cause damage to the seabirds and their feeding grounds.

The increased risk of pollution will take place in the context of inadequate capabilities to deal with such an incident and it is likely that the ability of the forces of nature to deal with the impacts will be St Kilda's only practical defence. It is a priority for the period of this Plan to develop Oil Spill Response Plans to prepare for such an emergency.

7.3 Oil and Gas Prospectivity

On the basis of current geological knowledge it is extremely unlikely that oil or gas is present in amounts that would make production economically viable within a 70km radius of St Kilda. The risk of oil spill as a result of oil developments in this area is therefore negligible. Oil spills resulting from oil exploration and production outwith this zone, though affecting the outlying surface waters, would be unlikely to reach the World Heritage Site in damaging quantities.

This conclusion is supported by Department of Trade and Industry’s Oil and Gas Office Offshore Environment and Decommissioning branch. This office is responsible for the development, implementation and enforcement of environmental legislation such that UK

oil and gas activity can proceed cost effectively, in an environmentally sound manner in the context of sustainability.

Additionally, activities associated with the exploration of potential hydrocarbon reserves are subject to the requirements of the UK's Offshore Petroleum (Conservation of Habitats) Regulations 2001 (Environmental Impact Assessment regulations). The Department of Trade and Industry (DTI) is undertaking a Strategic Environmental Assessment (SEA) programme around the UK, which aims to assist in the development of DTI policy; and licence rounds will only be conducted in areas which have been subjected to SEA.

7.4 Offshore Renewable Energy Development

Activities associated with the renewable energy would also require Environmental Impact Assessment prior to obtaining a licence. Additionally, the DTI is undertaking a Strategic Environmental Assessment (SEA) programme around the UK, which aims to assist in the development of DTI policy; and licence rounds will only be conducted in areas which have been subjected to SEA.

7.5 Visual Impact / Setting

Visual impact is judged to be the key potential risk to the setting of the World Heritage Site and to the intangible benefit of the "St Kilda experience".

The impact of development proposals on the setting of scheduled monuments is not addressed in the Ancient Monuments and Archaeological Areas Act 1979 and no additional controls result from World Heritage Site designation, but both are a material consideration in the planning system. Section 15(1) (j) of the *Town and Country Planning (General Development Procedure) Scotland Order 1992*, as amended by Section (5) of the *Town and Country Planning (General Development Procedure) (Scotland) (Amendment (No2) Order 1994* requires planning authorities to consult Scottish Ministers where a development may affect the site of a scheduled monument or its setting. With regard to the marine environment, methodologies for Environmental Impact Assessment and Strategic Environmental Assessment would require impact on the World Heritage Site, including visual impact, to be fully addressed and mitigated.

The Strategic Environment Assessments carried out prior to licensing for oil or gas exploration activities and prior to renewable energy production include an assessment of visual impact and thus provide a safeguard to mitigate this risk.

8. Designations

8.1 World Heritage Site

Nomination and Definition

St Kilda was designated as a World Heritage Site in 1986 for its natural characteristics, and in particular for its superlative natural features, its habitats for rare and endangered species, and its impressive populations of seabirds. A plaque to mark its designation was unveiled in the Church on Hirta on 10th August 1987.

World Heritage Sites are designated under the UNESCO (United Nations Educational, Scientific and Cultural Organisation) *Convention concerning the Protection of the World Cultural and Natural Heritage* (also known as the World Heritage Convention). This Convention was adopted by the General Conference of UNESCO in 1972, came into

force in 1975 and was ratified by the UK in 1984. The aim of the Convention is the "protection of natural and cultural sites of global significance, based on criteria of universal value and integrity". Such World Heritage Sites are recognised under the Convention by being placed on the World Heritage List.

Nominations to the list are evaluated by the World Heritage Committee (WHC) which takes advice from the International Union for the Conservation of Nature (IUCN) and the International Committee for Monuments and Sites (ICOMOS). To qualify for addition to the list, sites must meet a set of criteria for natural heritage and/or a set of criteria for cultural heritage.

St Kilda is not designated as a World Heritage Site for its cultural heritage, despite being nominated by the Secretary of State for Scotland for both its outstanding natural and cultural features and recommended for approval by ICOMOS. It was placed on the World Heritage List in 1986 for its natural characteristics only, with the decision on cultural status being deferred. In 1984 the WHC began to consider sites which had outstanding universal value both as cultural and natural sites. A further amendment to the Convention in 1992 included a provision for outstanding 'cultural landscapes' – paving the way for a new nomination to extend St Kilda's World Heritage Site status. [See also Appendix E and Figures 2 & 3.]

Obligation

Sites accepted onto the World Heritage List must be able to show that they will be protected and properly managed. The UNESCO World Heritage Committee Operational Guidelines set out the requirements as follows.

For cultural sites (para 24 (b) ii)

"… [sites must] *have adequate legal and/or traditional protection and management mechanisms to ensure the conservation of the nominated cultural properties or cultural landscapes. The existence of protective legislation at the national, provincial or municipal level and/or a well-established contractual or traditional protection as well as of adequate management and/or planning control mechanisms is therefore essential and, as is clearly indicated in the following paragraph, must be stated clearly on the nomination form. Assurances of the effective implementation of these laws and/or contractual and/or traditional protection as well as of these management mechanisms are also expected. Furthermore, in order to preserve the integrity of cultural sites, particularly those open to large numbers of visitors, the State Party concerned should be able to provide evidence of suitable administrative arrangements to cover the management of the property, its conservation and its accessibility to the public."*

For natural sites (para 44(b) v and vi)

"The sites described in paragraph 44(a) should have a management plan. When a site does not have a management plan at the time when it is nominated for the consideration of the World Heritage Committee, the State Party concerned should indicate when such a plan will become available and how it proposes to mobilize the resources required for the preparation and implementation of the plan. The State Party should also provide other document(s) (e.g. operational plans) which will guide the management of the site until such time when a management plan is finalized.

A site described in paragraph 44(a) should have adequate long-term legislative, regulatory, institutional or traditional protection. The boundaries of that site should reflect the spatial requirements of habitats, species, processes or phenomena that provide the basis for its nomination for inscription on the World Heritage List. The boundaries should include sufficient areas immediately adjacent to the area of outstanding universal value in

order to protect the site's heritage values from direct effects of human encroachment and impacts of resource use outside of the nominated area. The boundaries of the nominated site may coincide with one or more existing or proposed protected areas, such as national parks or biosphere reserves. While an existing or proposed protected area may contain several management zones, only some of those zones may satisfy criteria described in paragraph 44(a); other zones, although they may not meet the criteria set out in paragraph 44(a), may be essential for the management to ensure the integrity of the nominated site; for example, in the case of a biosphere reserve, only the core zone may meet the criteria and the conditions of integrity, although other zones, i.e. buffer and transitional zones, would be important for the conservation of the biosphere reserve in its totality."

In a general sense, nomination as a World Heritage Site is simply a recognition that a site is of global importance. This brings with it a greater public appreciation of the need to cherish the site and this may bring increased visitor pressure, but can also be a useful counter to any development pressures which may threaten it. The status of World Heritage Listing also brings with it increased public interest which can lead to pressure or damage from increased visitor numbers. In recent years the WHC has attached increasing importance to the monitoring of the state of conservation of sites on the List. If the results of this procedure show that there are threats to a site or a degradation in its quality, the Committee may decide to include it on the World Heritage in Danger List or in severe cases, remove it from the World Heritage List altogether (UNESCO 1994). The World Heritage in Danger List was established under Article 11 of the Convention and is designed to bring attention to the problems facing certain sites, and thus to focus the attention of those bodies who could influence the situation, principally the state Governments concerned, on the development of support and assistance for the site.

There are often no written obligations to accompany designation and none have ever been passed on to the Trust as owners of St Kilda. However, as the UK Government is party to the Convention, it has formally recognised its duties 'to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural heritage on its territory' (Article 4). It has agreed to perform this duty: 'to the utmost of its own resources, and where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain'. It is also obliged to adopt a general policy which is designed to give the natural and cultural heritage a function in the life of the community, to set up appropriate services, to develop scientific research and studies, to take appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage (Article 5).

World Heritage Sites are also defined as "sensitive sites" under Circular 15/1999 – The Environmental Impact Assessment (Scotland) Regulations 1999. This means that the consideration of an Environmental Impact Assessment has to apply for any development.

8.2 Biosphere Reserve

St Kilda was designated as a Biosphere Reserve on 17th January 1977. It was delisted in 2002. Since the late 1970s the intended functions of biosphere reserves have changed significantly with a greater focus on sustainable development, research, training and education in addition to conservation. Revised criteria for biosphere reserves were agreed by UNESCO in 1995, and many of the original reserves do not match the new criteria.

8.3 Special Area for Conservation

St Kilda is designated a Special Area for Conservation for its vegetated cliff areas, its reefs and its sea caves. These areas are considered to have a high diversity of habitat/species of European importance. Special Areas of Conservation (SACs) are designated under the EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (92/43/EEC). [See also Appendix N and Figure 5.]

At present an extension to the marine SAC designation is being proposed. In the mean time the site is regarded as if it has already been designated and therefore receives the full protection of the existing legislation. It is anticipated that a management scheme will be developed for the marine Special Area of Conservation that will address the relevant issues to ensure adequate protection of the interests of the proposed marine extension of the World Heritage Site. The development of the management scheme is seen as a collaborative process involving all Relevant and Competent Authorities together with representatives of interested stakeholder groups.

8.4 Special Protection Area

St Kilda was designated as a Special Protection Area (SPA) in 1992. The EC Directive on the Conservation of Wild Birds (Directive 79/409) established SPAs, which were to be designated by member states to ensure the conservation of habitats upon which particular species are dependent. This Directive places an obligation on the UK Government to maintain or re-establish a sufficient diversity and area of habitats for all species of wild birds naturally occurring in their European territories. It is hoped that a marine SPA will be designated at St Kilda in the future. [See Also Appendix O and Figure 5.]

8.5 National Nature Reserve

St Kilda was created as a National Nature Reserve (NNR) in 1957. The NNR designation was created under Section 19 of the National Parks and Access to the Countryside Act 1949 and Section 35 of the Wildlife and Countryside Act 1981. A NNR is selected because of its national importance as a site that can be managed in the long-term for the primacy of nature. [See also Appendix K.]

8.6 Site of Special Scientific Interest

St Kilda was designated as a Site of Special Scientific Interest (SSSI) in 1984. SSSIs are areas that have either biological, geological or geomorphological features of special interest and form a series designed to conserve the full range of features in the UK. The entire area of St Kilda was notified as an SSSI for its biological features, notably its marine grassland and heath, peatland, open water and coastland, its bird life and for its indigenous species of wren, field mouse and Soay sheep.

Protection of the SSSI is afforded down to the low water mark, by co-ordinated management and development control to ensure that special features are not damaged. A list of Potentially Damaging Operations (PDOs) has been drawn up and should the Trust or the MoD wish to carry out one of these operations, prior discussion with SNH must take place. [See Also Appendix L and Figure 5.]

8.7 National Scenic Area

St Kilda was designated as a National Scenic Area (NSA) in 1981. NSAs were identified by the Countryside Commission for Scotland in 1978 and were defined under the

provisions of an order by the Secretary of State for Scotland (Scottish Office Circular 9/1987). The enabling legislation for NSAs is provided under the Town and Country Planning (Scotland) Act 1972 and amended by the Housing and Planning Act 1986. They are areas deemed to be of 'outstanding scenic value and beauty in a national context' and their purpose is to draw attention to the need to preserve and enhance the character or appearance of the designated areas. Protection of the land in NSAs is largely through the planning system and Local Authorities are required to consult with SNH over a range of specified developments within a NSA boundaries. If a Local Authority decided to give permission for development contrary to the advice of SNH, the application would be referred to the Scottish Executive, who could call in the application for his own decision following a Public Inquiry. [See Also Appendix M.]

8.8 Marine Consultation Area

St Kilda is one of 29 Marine Consultation Areas (MCAs) which have been identified in Scotland by SNH. A MCA is "a site deserving special distinction in respect of the quality and sensitivity of its marine environment and where scientific information available fully substantiates its nature conservation importance" (NCC 1990). MCAs have no statutory standing but are made known to those bodies with which SNH has consultations on marine issues. They were originally introduced to respond to fish farming proposals but their use has been extended to provide improved protection against all potentially adverse impacts on the marine environment. [See also Appendix P.]

8.9 Geological Designations.

St Kilda was designated as a Geological Conservation Review Site in 1984, under three different subject headings: tertiary igneous geology; quarternary geology; and its coastal geomorphology. [See also Appendix Q.]

The Geological Conservation Review was carried out between 1977 and 1990 by the NCC (and latterly JNCC) to identify and help conserve geological and geomorphological sites of national and international importance in Britain, under a range of different geological subject headings. St Kilda is one of approximately 100 such key sites in Britain.

8.10 Scheduled Ancient Monuments

There are four large areas on Hirta that have been scheduled by Historic Scotland for the national importance of their archaeology. They comprise diverse and well-preserved multi-period remains of settlement on St Kilda, structures that date from prehistory through to the early 20th century. The remains have the potential to provide important information about life on St Kilda through the millennia, an extreme existence that was, and continues to be, of enormous interest to Scottish and international observers who documented the life of inhabitants from early times. [See Also Appendix F and Figure 4.]

PART FIVE

HISTORICAL BACKGROUND

1. History of St Kilda Prior to Acquisition by the Trust

1.1 A detailed account of the history of St Kilda can be found in the many publications about the islands [see Bibliography at Appendix A]. A brief outline of the history is provided below, to provide context for the later discussion of the management of the island.

1.2 The origins of the name St Kilda are uncertain, as there has never been a saint called Kilda. *Skildar* is the Old Icelandic word for 'shield' which would describe the shape of the islands as they appear to rest on the surface of the water (Quine 1995). *Skildar* was marked on many of the Dutch and French maps of the Outer Hebrides in the sixteenth century, such as that produced by Nicholas de Nicolay in 1583. It is thought that when this was later copied by Lucas J Waghenear, the S and the K were separated and a full stop put between them. Thus the form *S.Kildar* appeared in his book of charts in 1592 and probably led to the later adoption of the name St Kilda. An alternative was suggested by Martin Martin, a visitor to the islands in 1697, who thought that the islands may have been named after a well (Tobar Childa) sited near the village on Hirta:

> *'There is a large well near the town called St Kilder's well, from which the island is supposed to derive its name' (Martin 1698).*

1.3 Archaeological evidence suggests that Hirta has been occupied, almost continuously, for well over 2000 years. It is certain that the Vikings visited and may have settled the islands. The place names on the islands reflect both the Norse and Gaelic influence.

1.4 The first comprehensive account of life on St Kilda was provided by Martin Martin, tutor to the MacLeod clan chief, who visited the islands in 1697. At this time, St Kilda was owned by the MacLeods of Harris and Dunvegan, and would remain with a branch of the family until the time of evacuation in 1930. At the time of Martin's visit there were approximately 180 people on Hirta, living in a main settlement in Village Bay. They kept sheep and cattle and grew crops - but the most important component of their diet came from seabirds and their eggs. They harvested the gannets which were so abundant on Boreray and the Stacs and, in later times, came to depend on the fulmars and puffins which nested on the cliffs of Hirta and Dùn. The St Kildans were consummate and fearless climbers and caught the birds by either scaling the cliffs from the bottom, or more usually by lowering themselves down to the cliff ledges where the birds nested. The bird life also provided them with oil and feathers, which they collected and used as payment in kind for their rent.

1.5 Ropes and fowling rods were usually the property of all of the islanders, as were the areas of pasture and other items such as boats. Whether the numerous cleits (drying chambers) which can still be found dotted around the islands were all used communally is unclear. Ropes could, however, also be owned by individuals and at some stage in the history of the islands, they often formed part of a dowry. The cliff areas used for the harvest of sea birds were allocated between the families on the island and were rotated annually. At the time of Martin's visit, the people of St Kilda led a simple life, guided by basic Christian principles with their lifestyle in tune with nature and adapted to the pressures of survival in such a difficult environment. In later times their lifestyle became strongly influenced by the Church and the work of the various clergy who spent time on the islands.

1.6 In 1822, the Reverend John MacDonald, a renowned evangelical preacher known as the 'Apostle of the North' visited St Kilda. MacDonald set about constructing the foundations of a highly organised and puritanical religion on St Kilda. These were built upon by the Reverend Neil MacKenzie who arrived on the islands as resident minister in 1830. He also decided to try to improve the standard of living of the St Kildans and under his guidance the traditional 'run-rig' system of agriculture was replaced by a permanent allocation of land to each family. The old village was demolished and replaced during the 1830s by a curving line of black houses further down the slope in Village Bay. In 1861, MacLeod paid for a new set of cottages for the St Kildans, which were built by his masons from Dunvegan. These were erected alongside the black houses, many of which were retained as byres.

1.7 In 1865 the Reverend John Mackay was sent to St Kilda and set about imposing a particularly unyielding rule over the islanders. He held three services on Sundays, one on every day from Tuesday to Friday and advocated a strict observation of the Sabbath. Rather than rebel against this, the St Kildans embraced and devoutly followed Mackay's bidding. By this time, much of the tradition of music and poetry which had existed on the island had begun to be forgotten and now it was replaced by the requirements of this strict faith.

1.8 Another factor in the history of the St Kildans was the influence of disease on the islanders. The islands were devastated by a smallpox epidemic in 1724, from which only 4 adults and 26 children are said to have survived. (A further 3 men and 8 boys escaped exposure to the disease as a result of being stranded for several months on Boreray while on a fowling expedition). Although some new families were introduced from Harris and Skye, the population never again exceeded 110. Another factor in the decline was infant tetanus which, until it was finally eradicated in 1891, exacted a toll of 2 out of every 3 live births.

1.9 Visits to the Western Isles and further afield were not unheard of, and such travels impacted upon the population of St Kilda to a greater or lesser extent. For example, the emigration of 36 islanders to Australia in 1852 reduced the population to approximately 70, from which it never recovered.

1.10 The islanders' traditional economy also began to falter, with the oil and feathers they exported losing value on the mainland – though still accepted by the Factor as part of the rent. From the 1870s, however, steamers were calling regularly at Village Bay, full of well-meaning, curious visitors. They came ashore to see the inhabitants whom they regarded as quaint, and to buy souvenirs made by them. Money was introduced for the first time and the St Kildans came to rely on these tourists to provide them with a source of income. But by the beginning of the 20th century this fickle and uncertain source of income began to decline as St Kilda went out of vogue. What followed were years of hardship when illness, bad weather, poor harvests and lack of food seriously affected the quality of life and the expectations of the St Kildans. They had little source of income, although the sale of cattle and tweed to Skye and the mainland continued through the estate factor at least until 1914. Communication with the mainland was also difficult with the efficiency of their post office, which opened in 1899, often affected by weather conditions.

1.11 During the First World War, the islanders experienced a short reprieve when a Naval unit stationed on the island brought them a measure of prosperity as well as radio communication, regular mail, employment and supplies. The naval gun and ammunition store were added in 1918 in response to a German U-boat attack which destroyed the communications mast in front of the Factor’s House, left the Store in ruins and various other buildings damaged to a greater or lesser extent. However, in 1919 the Navy pulled out and the islanders' situation was once again difficult. By 1928 the population had

fallen to 37 and in 1930 the remaining islanders, guided by Nurse Williamina Barclay, decided that they had no future on St Kilda. They signed a petition requesting evacuation, which was sent to the Secretary of State for Scotland in May 1930. Eventually, their request was granted and on 29th August 1930 the 36 remaining St Kildans left the islands. They were taken by *HMS Harebell* to the mainland where the majority were to settle in Morvern, Argyll, to work for the Forestry Commission.

1.12 The island was sold by the MacLeods in 1931 to the Earl of Dumfries, later to become the 5th Marquess of Bute. He retained the island, unoccupied and managed as a bird sanctuary, until his death in 1956.

2. Acquisition by The National Trust for Scotland

2.1 In his Will, the 5th Marquess of Bute bequeathed St Kilda to The National Trust for Scotland. This bequest came before the Executive Committee of the Trust in October 1956, but no decision was reached at this meeting as to whether the bequest should be accepted. A reason for the indecision within the Executive Committee was that several other parties were also showing an interest in the future of St Kilda at this time which promised a complex management arrangement. In 1955 the Secretary of State for War had decided to establish an Inter-services Guided Weapons Range in the Hebrides and by 1956 a Services Land Requirements application to establish a radar station on Hirta to monitor the range, had been submitted to the Department of Health for Scotland. The Nature Conservancy Council (NCC) was also interested in St Kilda and was proposing to designate the islands as a National Nature Reserve.

2.2 Given the range of factors to consider, the Executive Committee felt that more information was needed before a decision could be made as to whether the bequest should be accepted. Two reports outlining the importance of St Kilda from natural heritage and archaeological points of view were then produced by the Nature Conservancy Council and the Assistant Inspector of Ancient Monuments respectively (Trust archives 1956). These were followed by a sequence of further arguments from the then Secretary of the Trust, Jamie Stormonth Darling. The primary argument he used was that under Section 4 (i) of the Trust's 1935 Order Confirmation Act, one of the general purposes of the Trust was to:

> *"promote the permanent preservation for the benefit of the nation of lands...of natural interest or natural beauty...and as regards lands for the preservation of their natural aspect and features and animal and plant life".*

The Trust had accepted Fair Isle in 1954 because of its natural beauty, wild life and historical associations and St Kilda seemed to qualify on these grounds even more favourably.

Stormonth Darling went on to point out that the Trust could only turn down the bequest on the grounds of (a) the remoteness of the island, (b) the Trust's complete and absolute confidence in the Nature Conservancy Council to manage the island for all its values, or (c) the consequent financial liabilities (Trust Memorandum 7.11.56). The potential benefits of the Trust owning the islands, rather than the Nature Conservancy Council were also outlined:

> *"Assuming that it is considered important that there are features on St Kilda worthy of protection and preservation, the Trust is better fixed to negotiate with a view to standing up against Government Departments, than are other Government Departments themselves. The Trust therefore has an important part to play both now in the negotiation stage and later in the consideration of development stage, and it will no doubt*

achieve more than will the State in the shape of the Nature Conservancy and the Ministry of Works on their own."

These arguments formed the basis of the Executive Committee's discussion at its December meeting in 1956, at which it was decided that the Trust should accept St Kilda, subject to a fund of £5,000 being raised to cover administration costs and capital expenditure. In January 1957, the Trust's Council duly endorsed the Executive Committee's recommendations and The National Trust for Scotland became owners of St Kilda.

3. Management of St Kilda Since Acquisition

3.1 At the time the Trust acquired St Kilda, several important decisions were taken, which have shaped its subsequent management. In particular, the radar station proposed in 1956 was established on Hirta, resulting in a human presence once again on the island with related infrastructure and technical equipment. This work was initiated by the Air Ministry and was taken over by the Army in later stages. For a long time under the administration of the Royal Artillery Range Hebrides (RARH), it is now managed from Benbecula by QinetiQ, a commercial company currently owned by the MoD.

The archipelago of St Kilda was designated a National Nature Reserve in 1957 and the Nature Conservancy Council was given the responsibility for managing the islands by the Trust for this purpose. Thus what evolved was a management relationship between the three parties: the Trust; the Nature Conservancy Council (now SNH); and the Air Ministry (now MoD).

3.2 Management Framework

As anticipated, the relationship created provided a complicated management structure for the islands. The presence of all three bodies necessitated that the responsibilities of each be defined and clearly understood by the other parties. What evolved was a management framework whereby the NCC leased the islands from the Trust and the Air Ministry sub-leased small areas of Hirta from the NCC.

3.3 Lease from the Trust to the NCC

After the announcement that a radar installation was to be built on Hirta, the NCC decided that the archipelago should be designated as a National Nature Reserve (NNR). To ensure the correct management and protection of a proposed NNR, its usual practice was to enter into a Nature Reserve Agreement (NRA) with the owners. However, the NCC perceived a problem with St Kilda in that the Trust, as owners, would not have any personnel on the property to oversee its administration. It also felt that a NRA would create a time consuming, three-cornered legal, financial and administrative relationship between the Trust, the NCC and the Air Ministry. For this reason the NCC, in agreement with the Trust, suggested drawing up a lease setting out the arrangement.

The initial documentation took the form of a 'Minute of Agreement', with an annexed 'Agreed Management Policy'. This was drafted in 1957, stating the terms agreed between the parties and binding them to draw up a formal lease. This was reinforced by a memorandum between the two parties (28th July 1960) instead of a formal lease, which by this time the two parties had decided was unnecessary and expensive.

Within the Minute of Agreement, it was agreed that the NCC would manage St Kilda as a Nature Reserve in consultation with the Trust, to preserve the character of the islands. The NCC would be responsible for placing a warden on the islands and for managing and controlling the activities of the Air Ministry, who were to build and man the St Kilda radar post. The lease was to run for 21 years and the rent payable by the NCC was set at £1 per annum, with an agreement that any money paid by the Air Ministry as compensation

in respect of disturbance, would revert to the Trust. A 'Joint Standing Committee' to advise on the general administration of the islands, was also set up, comprising three members from the Trust and three from the NCC.

In 1977, it was noted that a formal lease had never been drawn up between the Trust and the NCC. It was thus suggested that this should be rectified and a 25-year lease was drawn up with the NCC due to the expiry of the previous Minute of Agreement. The rent was increased and backdated to 1976 and the lease was finally completed in 1981. This revised lease dissolved the Joint Standing Committee, and inserted in its place the requirement that the NCC produce a Management Plan for the St Kilda NNR, to be revised every 5 years. Following two one-year extensions this lease ends on 28 February 2003, to be replaced by a new lease between the Trust and the MoD.

3.4 Sub-lease between the NCC and the Ministry of War.

Work on the radar sites on Hirta was started by the Air Ministry in 1957, but by August of 1958 this responsibility had been transferred to the Army. As mentioned above, as lessees of St Kilda the NCC had originally been given the responsibility of overseeing the activities of the Air Ministry. Given the changes in the Service involved, this arrangement was formally agreed in a sub-lease between the Nature Conservancy Council and the Ministry of War which was completed in 1960. The result was a 'linear' chain of responsibility for St Kilda: the Trust as owners leasing the islands to the NCC, who in turn subleased small areas of Hirta to the Ministry of War. This administrative structure was so designed to try to avoid a complex three way discussion process for day to day matters, and to ensure that there was an accepted route for any correspondence.

Four small areas on Hirta were included in this arrangement: two areas in Village Bay near the pier - for accommodation, stores and a helicopter landing pad; an area on Mullach Mor for the main technical site; and two areas on Mullach Sgar. The period of the sub-lease was 21 years and the rent was set at £1 per year, plus £100 per year to be paid to the NCC as compensation for any disturbance caused by Army operations.

Within the sub-lease, the Army was given permission to construct permanent buildings at the technical sites at Mullach Mor and Mullach Sgar, and both temporary buildings and permanent buildings in the Village Bay area. Permission was given to build new roads and to improve the pier and access road (subject to permission from the NCC). The location and specifications of roads and buildings had been agreed in advance by both the Trust and the NCC.

To safeguard the interests of both the Nature Conservancy Council and the Trust, a set of 'Standing Orders' was annexed to the sub-lease outlining what army personnel and their contractors were not to do on St Kilda. Also annexed was a set of conditions drawn up by the Department of Health which required the Ministry of War to consult on its developments and to ensure that existing buildings and structures on the island were not damaged during construction.

3.5 History of MoD developments on St Kilda.

The presence of the military on St Kilda since 1957 has resulted in the construction of radar and associated buildings on two sites (Mullach Mor and Mullach Sgar) and of buildings, roads, a quarry and other infrastructure necessary to accommodate army personnel and to provide the services required to run the radar. Most of this other development has been located in the Village Bay area.

The Air Ministry started the development work in 1957 with the construction of the camp in the Village Bay area, and the road to the radar sites. The technical radar equipment was completed by 1959 when the first missiles were fired on the range. Development,

mostly in the form of upgrading of technical sites, has continued to keep pace with technical and operational requirements.

DESCRIPTION OF KEY FEATURES

1. Physical Features

1.1 Location and Area

The archipelago of St Kilda (National Grid Reference NA095995) is situated in the Parish of Harris, in Western Isles Island Region, 64 Km (41 miles) WNW of Griminish Point, North Uist. [See Figure 1.]

There are four main islands - Hirta, Soay, Boreray and Dùn; three sea stacs - Stac an Armin, Stac Lee and Levenish; and a great number of smaller stacs and skerries. The total area of the archipelago is 854 ha (2,107 acres). Table 1 shows the areas and maximum heights of the different islands which make up St Kilda (Small and Boyd 1979).

St Kilda - Major Islands		
	Area (ha)	Maximum Altitude (m)
Hirta	628.5	425.8
Soay	96.8	377.7
Boreray	86.5	383.7
Dùn	32.0	177.7
Stac an Armin	5.8	196.3
Levenish	1.3	61.9
Stac Lee	2.3	171.9
Soay Stacs	1.4	*n/k*

Table 1. Area and maximum altitude of the islands and stacs of St Kilda.

1.2 Map Coverage

The first official survey of St Kilda was published by the Ordnance Survey in 1928. Current Ordnance Survey maps of the islands which are available are:

1: 50 000 Landranger Sheet 18 (Sound of Harris and St Kilda)
1: 25 000 Sheet 1373
1: 10 650 NA 10 NW NE SW SE (1967)
NF 09 NE 19 NW (1967)
NA 00 SE 10 SW

1.3 Topography

Hirta, the largest island of St Kilda, has a smooth inland landscape dominated by the rounded tops of Mullach Sgar, Mullach Mor, Conachair and Oiseval which, together with the horseshoe shape of Village Bay, have given rise to a grassy 'amphitheatre' open to the sea at the south east. Village Bay is exposed only to the south east wind and its beach provides the main point of access to Hirta. On the opposite, north east, side of the island, Gleann Mor provides another, narrower, grassy bay. The remainder of this island is cliff bound.

The summit of Conachair is the highest point of St Kilda (425.8m, 1397 ft) and the seaward faces of Hirta are characterised by their extensive grassy slopes, often inclined at 80°, which drop to sheer cliff faces. Hirta has two main stream systems, Abhainn Mhor (Big River) and Abhainn 'Ghlinne Mhor (River of the Big Glen), which drain into Village Bay and Gleann Mor respectively. Many streams are dry between periods of rain, while others run throughout the year from perennial fresh water springs.

Dùn is separated from Hirta by a 20m (70ft) channel and forms a breakwater against the Atlantic storms on the south west of Village Bay. It is a precipitous ridge, approximately 1.5 km (1 mile) long and varies in width between 100 and 200 metres. Its south western coast is dominated by cliffs which have been deeply eroded by the sea, whereas the Bay side of the island is composed of steep slopes covered with a lush green vegetation.

Soay, lying just to the north west of Hirta, is separated from the main island by a stac-filled strait. It is the second largest land mass in the archipelago and entirely cliff-girt, though vegetated on its cliff top. Its topography is characterised by immense boulders, long slopes and difficult terrain (Quine 1995).

Boreray, Stac Lee and Stac an Armin lie some 7.5 km (4 miles) north-east of Hirta. Boreray is an island of precipices which rises up almost vertically from the sea to a height of 384 m (1259 ft). Its coastline consists of high black cliffs and on the east side of the island there is a steep grassy slope of some 40°. The west side is a sheer cliff. Stac Lee (the stac of colours) to its west, rises vertically to a height of 172 m (564 ft). From the south it appears like a massive, flat wall with a few sloping white ledges; from the west its sides are vertical, with a summit ridge sliced off at a 45° angle. The most impressive view is from the south east, where it rises out of the water like a huge fang. Stac an Armin, the warrior's stac, is the highest sea stac in Britain. It rises from the sea to a height of 196m (644 ft) and looks like a massive rock wedge, with an overhang towards Hirta. Its southern sloping side is made up of a series of giant rock steps with boulder screes between.

1.4 Climate

St Kilda has an oceanic (Atlantic) climate, modified by the physical effect of the island itself rising sharply from the sea. This often makes it cloudier than the surrounding sea area and increases rainfall and the local gustiness of the winds.

The strong oceanic influences and presence of the North Atlantic Drift result in higher winter temperatures than would be expected for the latitude. Conversely the summers are cool. The mean daily temperature in January is approximately 5.6°C, while the July mean is approximately 11.8°C.

The islands lie in the path of depressions approaching from the Atlantic and as a result have a high annual rainfall of approximately 1400mm (Small 1979). This rainfall is well distributed throughout the year with a maximum in December-January, and the driest period, associated with anti-cyclones approaching from the Atlantic, falling between mid-April and mid-June.

The prevailing winds on St Kilda are from the south-west, although approximately 20% of the winds come from the south-east, to which the village is fully exposed. The wind speed on St Kilda is Force 3 or above (13 km per hour, 7 knots) for approximately 85% of the time and Force 5 or above (over 24 km per hour, 17 knots) for more than 30% of the time. Gale force winds (63 km per hour, at least 34 knots) are present for under 2% of the total time in any one year. However within these gales, very strong gusts of over 185 km per hour (100 knots) are common on the high tops (Small 1979).

The configuration of St Kilda, the nature of its physical landscape and its exposure to the full force of the North Atlantic amplify the effects of the weather. Sea spray has a dramatic effect on the vegetation and the weather has often prevented access to the islands.

1.5 Geology

The geology of St Kilda was extensively surveyed by the British Geological Survey in 1979-80 and is included in the British Tertiary Volcanic Province prepared for the Joint Nature Conservation Committee in 1984. In 1984, the British Geological Survey published a geological map of St Kilda at 1:25,000. The following summary is taken mainly from the description provided by the British Geological Survey. [See also Figure 8.]

The islands of St Kilda are of relatively recent geological age. They comprise a range of intrusive igneous rocks which were formed in the core of a tertiary volcano about 55 million years ago. The rim of the volcano is defined by Soay, south and west Hirta, Dùn, Levenish and a sub-marine peak ENE of it continuing round towards Boreray. The igneous rocks of the islands are composed of gabbros invaded by thick sheets of dolerite and basalt, and on Hirta, later masses of granophyre. Hirta's smooth topography is a characteristic weathering feature of its granophyre masses, whereas the jagged cliffs of Dùn and the stacs are erosion products of the coarsely crystalline gabbros.

The oldest rock is the Western Gabbro which forms most of the west coast of Hirta and Dùn. It is a coarse grained plutonic rock composed of feldspar, olivine and pyroxene. On Dùn, Ruaival and in Gleann Mor, this Gabbro is in contact with the younger rocks of the predominantly basic Mullach Sgar Complex which covers the central section of Hirta. Sixty million years ago, finer grained and darker sheets of basalt and dolerite were injected into the gabbro and can be seen in outcrops on Mullach Bi (British Geological Survey 1979-80).

Fifty-six million years ago the intrusion of granophyre occurred and three large areas of this rock can be seen on Hirta. These are a distinctive lighter colour - a light grey, cream or pink - and are present along the cliffs on the south-west of Hirta and extending into Dùn. Thirty-five million years ago a suite of basalt and dolerite sheets and dykes was injected into the geology of the islands. These are black, fine grained sheets up to 2m thick, which can be seen in the high sea cliffs north of Conachair. St Kilda is the best example in Scotland of the results of at least four phases of igneous activity in quick succession. All igneous activity came to an end about 35 million years ago, with the intrusion of a new and extensive suite of dykes and sills of black, fine-grained basalt and dolerite, which contrast so markedly with the pale granophyre, especially visible in the high sea cliffs north of Conachair.

Although in the past it was thought that the Hebridean Ice Sheet did not reach St Kilda, some recent research indicates that this might not be the case and that the ice sheet did indeed reach the archipelago. At the height of the last Ice Age small, thin glaciers developed on Hirta in several places. During the Devensian glaciation maximum, a small valley glacier occupied Village Bay from An-lag to the morainic ridges on the lower slopes of Mullagh Sgar. Locally derived till deposits associated with this glaciation, consist of boulders in a gravel and sand mixture and are well displayed in the low cliffs above the beach and in the lower reaches of the Abhainn Mhor (British Geological Survey 1984).

The spectacular cliffs and stacs for which St Kilda is famous are a result of post glacial marine erosion. Between Hirta and Boreray, the presence of an extensive submarine platform at 60m (approximately 220 ft) depth indicates that marine erosion was formerly at a lower level. Many of the stacs and cliffs descend steeply below the present water level and form submarine cliffs, occasionally containing submerged caves. The islands we see today are therefore part of a *drowned landscape* (British Geological Survey 1984).

Recent bathymetric surveys around St Kilda have traced the spectacular remnants of the original volcanic crater on the sea bed. The whole structure has collapsed inwards – in a process known as 'cauldron subsidence' – leaving an inner platform 60m below the present sea surface. The perimeter forms an almost completely circular rock wall linking Dun, Hirta and Soay to Boreray and the stacks, all of which protrude above the surface to form the archipelago we know today. Outwith this mighty structure the seabed is some 140m deep.

The importance of the Tertiary Igneous and Quarternary geology of St Kilda was recognised in its inclusion as a Geological Conservation Review Site by the NCC in 1984.

1.6 Geomorphology

Coastal geomorphology

The Nature Conservancy Council (NCC) highlighted the aspects of the interest of the geomorphology of St Kilda in its Geological Conservation Review (1984). The archipelago's rock coast geomorphology is important because of its unique location in relation to submarine topography and available energy, its relatively uniform geology, the variations in coastal aspect, and in the case of Hirta, for its spectacular and rugged coastline. The Geological Conservation Review describes the geomorphology as follows:

> *"The islands' coastline has formed almost entirely as cliffs. These are of particular interest for submergent, high-energy exposed forms which rise to considerable heights in an area which has been relatively little affected by isostatic depression or ice sheet glaciation. The entire coastline is subject to great extremes of wave and wind energy with only the frequency varying between coasts of different aspect. To the south west of Soay, Hirta and Dun the sea bed slopes rapidly down, allowing high energy Atlantic waves unimpeded access to exposed coastlines. Overall the combination of marine and sub-aerial erosional processes and mass movement processes provide an excellent diversity of landforms in close proximity."*

Quarternary geomorphology

According to the NCC, Gleann Mor on Hirta is important in providing palaeo-ecological and palaeoenvironmental data for a remote and relatively inaccessible part of the British Isles (NCC 1990).

> *"The pollen record, which is of national and international importance, provides valuable data on the history of the vegetation of St Kilda during the Loch Lomond stadial of the Late Devensian period. In particular, in contrast with other areas of the British Isles and North-west Europe, human influence on the vegetation of the islands appears to have been minimal so that the pollen sequence provides a rare proxy record of climatic changes in the North Atlantic spanning the last 6,000 years"*

1.7 Soils

In the cool, wet climate of St Kilda biological activity is low, leaching is intense and the rate of chemical weathering is slow. As a result, acid, peaty soils and peats predominate (Gwyne et al

1974). On Hirta, blanket peat is found in two main areas, between Mullach Mor and Conachair and on the west side of Gleann Mor. These soils are associated with *Eriophorum* bog vegetation and would cover larger areas of Hirta if it were not for the island's steep slopes.

On a small number of gently sloping sites which receive large amounts of sea spray, a different type of peat is found (Gwyne et al 1974). This is associated with a *Plantago* sward, is very dense and has a dry, friable consistency. It is moderately acidic and has a high base saturation, due to the high content of exchangeable magnesium and sodium from sea spray.

The other soils found on Hirta belong to three broad Associations which are related to the parent geology: a) Conachair granophyre; b) the geologically varied but predominantly Basic central area; and c) the ultra Basic rock of the Mullach Bi ridge (Gwyne et al 1974). The Granophyre Association covers the southern and eastern slopes of Conachair, the basin of An Lag, the western facing slopes of Oiseval and the eastern parts of the village. The Mixed Basic Association covers the central section of Hirta and is a mixture of basic and intermediate rocks with more Basic types predominating. The Ultra-Basic Association, on Mullach Bi, western parts of the Cambir and Ruaival, is moderately acidic , but contains a high content of exchangeable cations due to the high contents of magnesium and sodium from sea spray. The range of soils found within each of these Associations is outlined in Table 2. [See also Figure 9.]

The soils in the village area are underlain by a mixture of acid and basic parent materials and have a long history of cultivation, which has involved the removal of boulders, vertical mixing (from digging) and surface addition of manure, turfs, ashes and seabird carcasses. These 'plaggen soils' (Gwyne et al 1974) have a very deep A horizon and are neutral to weakly acid with a good structure for cultivation.

Soil Association	**Soil types included**
Granophyre Association	Humus Iron Podzols; Peaty Gleys; Anthropic Gleys; Peaty Rankers; Cliff complex
Mixed Basic Association	Podzolic soils with thin iron pan; Peaty-gleyed Podzols; Peaty Gleys; Peaty Rankers; Brown Earths; Cliff complex.
Ultra-Basic Association	Podzolic Soils; Peaty Rankers; Cliff Complex.

Table 2. Soil Associations and types found on Hirta (Gwyne et al 1974).

Since 2000, analysis of the chemistry of the soils on Hirta has been undertaken by Aberdeen University. Preliminary studies have shown that the use of seabird carcasses as a major ingredient of manure in the village fields may have created soil fertility problems in the longer term. Although the use of seabird carcasses was commonplace for over a hundred years, it is thought that the soil standard was another variable that contributed to the decline of the St Kilda community.

2. Land Use

2.1 National Nature Reserve

The entire area of St Kilda is designated and managed as a National Nature Reserve (NNR).

2.2 QinetiQ Range Hebrides

The purpose of QinetiQ Range Hebrides is to provide a safe environment and technical support for the test firing of missiles by the Army, Royal Navy and Royal Air Force, for foreign forces and for defence contractors. The Range comprises several sites spread across North Uist, Benbecula and South Uist. It is owned by Defence Estates on behalf of the MoD and managed by QinetiQ. There is a small land danger area on South Uist, and an air and sea danger area extending 260km by 95km into the North Atlantic. St Kilda, which falls within the sea danger area but is not used as a firing target, hosts a forward instrumentation site for the Range – a static platform for highly sensitive instrumentation. The Range comprises:

- Inner Range: South Uist; primarily used by the Army for the firing of land based short range air defence missile systems.

- Outer Range: used by the Royal Navy and RAF for the firing of longer range missiles

The topography of Hirta, coupled with its location towards the north east of the sea danger area, makes it an idea location for equipment that provides communication links with Range Control, i.e. air and sea surveillance radar, missile tracking radar, steered aerials for the Range telemetry systems and flight termination systems. In addition there are two radar sites on Mullach Mor and Mullach Sgar. [See also Figure 7.]

This infrastructure is supported by the Village Bay Services Complex, a 1.5 hectare site close to the beach, providing accommodation and support facilities for the staff required to maintain the radar facilities on Hirta. The accommodation consists of sleeping quarters with domestic support, a fully equipped medical centre, kitchens and recreational facilities. Support facilities consist of a Power House and Bulk Fuel Installation, vehicle workshop, garages, stores, incinerator and microwave telephone links.

3. Flora and Fauna

3.1 Flora

In general, the vegetation of Hirta is grassland, with wind blasted heather communities on steep slopes in Village Bay. The grassland is influenced, from cliff faces to meadows, by sea spray and the droppings of sheep and seabirds. Within the village area, grassland has developed on arable land abandoned by the St Kildans in 1930. There are no trees, shrubs or rare vascular plants, although there are some notable species of bryophytes and lichens. Hirta and Soay are grazed by Soay sheep, those on Hirta having been introduced from Soay by the Earl of Dumfries (later the 5th Marquess of Bute) after the evacuation of the islands. Boreray is also grazed, but by feral sheep of a 1920 Blackface type left by the St Kildans. There are no sheep on Dùn, which is one of the few completely ungrazed and thus largely undisturbed islands in Britain (Boyd 1979).

The following description of the flora of St Kilda is taken from 'A Nature Conservation Review' (NCR) (Ratcliffe 1977).

> "Botanically the most striking environmental features of the St Kilda group are first, the prevailing high humidity, which is reflected in the generally peaty nature of the soils, and in the wide distribution of hygrophilous oceanic plants, such as *Frullania germana*; and secondly the evidence that salt spray strongly affects the whole of these islands. On Hirta opposite Dùn and on the Cambir, the occurrence of halophytic *Plantago* swards on cliff tops hundreds of metres above the sea is an indication of the spray drenching which these sites receive during storms. Halophytes such as *Asplenium marinum* and *Grimmia maritima*

> occur in places farthest from the sea and much of the prevailing grassland has a sub-maritime character. Vast numbers of seabirds have a marked fertilising effect on the pastures and the enriching influence of the sea spray also helps to give swards sufficient productivity to support a good stock of Soay sheep on Hirta and Soay, and Blackface on Boreray".
> "Away from the cliffs, Soay and Boreray are covered largely with the *Holcus lanatus*, *Agrostis stolonifera*, *A. capillaris*, *Anthoxanthum odoratum*, *Festuca rubra* type of sub-maritime grassland , and only Hirta has areas sufficiently free from the influence of salt water and heavy manuring by sheep and birds to carry paramaritime communities. These are mainly a range of acidic, species poor grasslands and heaths of a submontane character, found widely on lower hills along the western Highland seaboard. A mixed *Nardus-Calluna-Racomitrium lanuginosium* heath is quite extensive, and the summit of Conachair has a *Luzula sylvatica* dominated grassland. There is an interesting flush community with much *Schoenus nigricans* in one place ".
> "St Kilda is an example of an extreme oceanic island group, although the climate in this northern district is of the cool Atlantic type. This is marked by the occurrence of montane species such as *Silene acaulis* and *Saxifraga oppositifolia* on sea cliffs. Yet the climate is still equable enough to allow the presence of some southern species, and the Mediterranean-Atlantic liverwort *Fossombronia angulosa* occurs here far beyond its next northernmost locality, in Donegal, Ireland."

A revised edition of the SSSI citation for St Kilda, notes the importance of the archipelago for its maritime grassland and heath, peatland, open water and coastland. Additionally, the vegetated sea cliffs are seen as nationally important, having been recognised as a qualifying feature in the SAC designation.

A colour vegetation map of at 1:10,000 Hirta was published by the Nature Conservancy in 1971, identifying the different grassland, heathland and maritime communities, based on the classification by Gwynne and Milner (1971). However, this has been superseded by a National Vegetation Survey of Hirta and Dun, commissioned by SNH and carried out by Central Environment Surveys in 1996. This identified five broad plant community types, classified as follows (with the number of NVC communities or sub-communities in each type given in brackets): maritime cliff (7), mesotrophic grassland (1), upland grasslands (4), heathland (1), and mires (3).

There are about 140 species of vascular plants on Hirta, but no nationally rare or scarce species apart from two species of eyebright. A full list is given in *The Flora of St Kilda* by MJ Crawley (1993).

The flora contains extremely interesting examples of 'niche expansion' where one species has occupied the niches filled by several other species in the Outer Hebrides. Good examples are *Ranunulus acris* (doing the jobs of *R. repens* and *R. bulbosus*) and *Leontondon autumnalis* (doing the jobs of *Hypochaeris radicata* and *Crepis capillaris*). These plants may well be represented by a range of different (perhaps unique) genotypes, and would repay further investigation.

There has been limited botanical work undertaken on islands other than Hirta and Dun. Boreray and Soay are both significantly smaller than Hirta, with a more restricted flora. For Boreray, J. Roper Lindsay has produced a vegetation map and listed 45 vascular plants and 34 lichens (*The Boreray 1980 Expedition Report*). For Soay, the Brathay Exploration Group have produced a simple vegetation map and listed 50 vascular plants (*Field Studies on St Kilda, 1971*).

Hirta has been recognised as being of national importance for its bryophytes and lichens, with 160 species of moss and liverwort and 194 species of lichen recorded. Additionally, 162 species of fungi have been recorded to date.

3.2 Fauna

Four distinct features of the St Kilda fauna are of outstanding interest: the seabirds; the endemic sub-species of wren and mouse; the Soay sheep; and the marine life. The invertebrate fauna of the archipelago has not been fully studied, although an impressive 10 parasitic ichneumons unique to St Kilda amongst the Western Isles, have been recorded. The Invertebrate Site Register for St Kilda indicates that there is one endangered invertebrate, a weevil *Ceutorhynchus insularis,* and one rare invertebrate, a fly *Calliphora uralensis*.

3.2.1 Seabirds

On the strength of its breeding seabird populations St. Kilda has been designated a UK National Nature Reserve and Site of Special Scientific Interest and a EU Special Protection Area. These islands are jewels set in a pristine marine environment and function as the seabird sanctuary *nonpareil* of the eastern Atlantic.

St. Kilda's exposed cliffs have long hosted seabird communities of historical fascination as well as exceptional biological importance. To take just one example from the historical context, St. Kilda is famous as one of the best-known haunts of the extinct Great Auk *Pinguinus impennis*, being one of only three sites in the eastern Atlantic where this species is known certainly to have bred. That the ornithological history of the islands has been so well-documented testifies to their place in world heritage.

For the most part deserted in the winter months, 17 species of seabird come ashore in spring and summer to breed on St. Kilda, rendering the archipelago the largest seabird colony in the British Isles. Their populations were censused most recently in 2000 and 2001 by the UK Joint Nature Conservation Committee, when the national and international importance of St. Kilda's seabird aggregations was reaffirmed. The accepted threshold for such status is that at least 1% of the relevant population, be it national, international or biogeographical, is represented in the aggregation. [See Figure 11.]

Today, St Kilda hosts approximately one million birds at the height of their breeding season and is the largest seabird colony in north-west Europe. This includes the largest gannet colony in the world (60,428 breeding pairs), the largest Northern Fulmar colony in Britain and Ireland (66,942 apparently occupied nest sites) and the largest Atlantic Puffin colony in the British Isles (over 13,500 apparently occupied burrows).

There are also noteworthy populations of all three species of nocturnal petrels that breed in the north-east Atlantic, including the largest colony of Leach's Storm-petrel *Oceanodroma leucorrhoa*. In addition, more than 1.5% and more than 1% respectively of the British Isles and north-east Atlantic populations of the Common Guillemot *Uria aalge* breed on St. Kilda and more than 1% of the British Isles population and almost 1% of the north-east Atlantic population of Razorbills *Alca torda* nest on the high cliffs of the archipelago. St. Kilda also contributes more than 1% of the north-east Atlantic population of Manx shearwater breeds and is thus of national and international importance for the species.

More than 1% of the world population of Great Skua *Catharacta skua* breeds on St. Kilda. Predation by Great Skuas on the petrel populations of the islands appears to have increased in recent years, perhaps as a consequence of changing fisheries practices at sea, but this fearless predator remains a key species in the seabird assemblage of St. Kilda.

The breeding Northern Gannet *Morus bassanus* population increased markedly in the 20th century and represents 24% and 23% of the British Isles and north-east Atlantic populations respectively, and almost 20% of the world population.

St. Kilda hosts the largest Northern Fulmar *Fulmarus glacialis* colony in Britain and Ireland with about 67,000 pairs currently nesting; this represents more than 13% of the population breeding in the British Isles and almost 4% of the north-east Atlantic population. That the population remains in such good health is testimony to the productivity of the fulmar's natural feeding areas at sea.

The Atlantic Puffin *Fratercula arctica* population is largely stable, with more than 30% of the total numbers of puffins breeding in the British Isles and more than 4% of those breeding in the whole north-east Atlantic (2% of the world population) doing so on St. Kilda.

Seabirds breeding on St. Kilda forage over a wide area of the north Atlantic. Species such as the auks (i.e. puffins, guillemots, razorbills) might fly more than 30 km daily towards the west coast of the Outer Hebrides to forage while the storm-petrels and Manx Shearwater *Puffinus puffinus* may roam over much larger distances off the continental shelf to search for food. The larger gull species probably fly only short distances to forage and possibly also scavenge and species such as the European Shag and the Black Guillemot have an inshore distribution at all times and exploit small fish only short distances from the St. Kilda coast. However, for the most part the foraging areas of St. Kilda seabirds are extremely large and disjunct, defying accurate identification.

Although most species do feed in them, the waters immediately around St. Kilda are used by all birds, perhaps on a daily basis, for purposes other than feeding. Such inshore areas are used primarily for display, courtship, bathing and preening. They are also used by non-breeding birds for maintenance activities such as washing and preening. These areas are more discrete and more readily identifiable.

There are few data that indicate exactly where seabirds occur in those parts of the sea immediately adjacent to their colonies but analyses of the available data around St. Kilda, informed by similar analyses of data at other important colonies, does suggest a core area of use for the various species. Such areas, including those around St. Kilda, are currently being considered for classification as marine Special Protection Areas under the EC Birds Directive.

The biggest potential threat to seabirds at St Kilda would be the colonisation of the islands by rats. Measures to prevent this occurring and to ensure an adequate and appropriate response in the event of this happening, are discussed in the prescriptions in this Management Plan.

3.2.2 Migrant Birds

St Kilda is visited by an ever-growing list of migrants and vagrants. Some are on their regular route to and from more northerly breeding grounds, while others are blown off course; all find the archipelago a welcome stopover in adverse weather. Over a hundred species may turn up in any year and since the first complete checklist of birds was compiled in 1978, 49 new species have been added to the list, about two a year on average.

3.2.3 Indigenous sub-species.

St Kilda Wren (*Trogoldytes troglodytes hirtensis)*

The St Kilda wren is a sub species of the mainland wren, slightly larger, paler in colour and with differences in its song and breeding behaviour. After publication of its description in the last century, the very existence of the bird was said to be threatened by collectors. It was made the subject of legislation in the Wild Birds Protection (St Kilda) Amendment Bill in 1904 which also conferred protection on the Leach's fork tailed petrel .

The wren is present on all of the islands and with the exception of a few pairs which breed in Village Bay, all are found on the sea cliffs. They are particularly numerous on Dùn, Carn Mor and on the east face of Oiseval and are mostly associated with breeding puffins whose organic litter

no doubt sustains an abundant insect life utilised by the wrens (Boyd 1979). Williamson (1958) provides a detailed description of the wren, its population and breeding environment. A more recent survey (1993) indicated that there were 113-117 breeding pairs of wrens on Hirta.

St Kilda Mouse (*Apodemus sylvaticus hirtensis)*

The St Kilda field mouse, like the wren, is a sub-species indigenous to St Kilda. About 17cm (6.5") long and over 70 grams (2.5 oz) in weight when fully grown, it is much larger than the mainland field mouse and has a deeper, more russet coat with a paler belly. These mice, like the wren, are so different from mainland species that they may have survived the last Ice Age on St Kilda, while all other mice in Northern Britain were exterminated by the ice. An alternative suggestion is that the mouse was introduced at a later date by the Vikings. The field mouse, like the wren, is dependent upon the puffins and the sheep for enrichment of their habitat with organic materials (Boyd 1956, Boyd 1979).

According to the NCR criteria, this race of mouse is regarded as of national importance (Ratcliffe 1977).

Before the time of the evacuation in 1930, a second type of St Kilda mouse existed - the St Kilda house mouse (*Mus musculus muralis)*. A subspecies of the common house mouse, this did not survive the evacuation of humans and became extinct within a year of that date.

3.2.4 Soay and Blackface sheep

Soay Sheep

The Soay sheep (*Ovis aries L)* are the most primitive sheep in Europe, closely resembling both the original wild species and the domesticated sheep first brought to Britain in Neolithic times about 5000 BC (Clutton-Brock 1981). They may have been introduced to St Kilda in the 2nd Millennium BC, but by historical times they were restricted to the uninhabited island of Soay and are unlikely ever to have experienced much interference from the St Kildans. In 1930, at the time of evacuation, the Blackface sheep kept by the St Kildans on Hirta were rounded up and sold on the mainland. The Blackface flock on Boreray was left there to fend for itself. Two years later, 107 Soay sheep, some of which may have been castrated, were introduced to Hirta from Soay. Numbers on Hirta increased rapidly and, in 1952, the first organised census produced a figure of 1,114 sheep. Although the sheep are distributed throughout Hirta, a large proportion of the total (30%) use the Village Bay area (Clutton-Brock et al 1992). The Soay sheep have been the subject of close scientific observation since 1957. These studies have shown that since then, the population of Soays on Hirta has fluctuated irregularly between 600 and 2000. According to Jewell et al (1974), the ecological factors governing these oscillations in numbers are:

a) Consistently high fecundity (fertility) of the sheep, *coupled with*

b) a super-abundance of food in summer.

These factors allow the population to pass through the winter at a level close to carrying capacity, to increase by as much as 50% during the subsequent summer, and thus to enter the next winter at a level substantially higher than the island can support. Under these conditions, this natural regulation causes the sheep populations to 'crash' dramatically in late winter and early spring (Clutton-Brock et al 1992). In the years when such a crash occurs, visitors to Hirta will see a number of dead sheep scattered around the island. This is a natural result of deliberate non-management of the flock, which is treated as a wild population – the Soay sheep on Hirta live under similarly harsh conditions as they would have originally done on Soay and naturally regulate their own population in this way. This deliberate non-management is permissible by law because the sheep a) have no owner, b) are not on agricultural land and c) are not considered to

be either a domestic or captive population. The sheep on Soay (and Boreray) still live under these conditions today.

Blackface Sheep

In addition to the Soay sheep on Hirta and Soay, a flock of Blackface sheep exists on Boreray. These are descendants of those left behind when the St Kilda people were evacuated and represent a cross between an early type of Scottish Blackface with a Hebridean type of Scottish Shortwool. The average annual recorded population has been in the order of 402 sheep (Boyd (1981), calculated using a 28 year record). The sheep seem to have achieved an equilibrium with their environment on Boreray, so that their stocking rate rarely damages it through overgrazing or erosion (Boyd 1981).

The management of both types of sheep on St Kilda was discussed by Boyd and Jewell (1974), who concluded that it would be unwise to interfere with the natural regulation of sheep on these islands. However, some small scale manipulation of the Village Bay population has been carried out to improve understanding of the causes of variation in survival. According to Boyd (1981), the presence of the sheep on the islands can be considered a 'human artefact' and he argued that they have become part of the cultural history of the islands and provide a biological link with the past native human community. He concluded that however the sheep on St Kilda are managed, they should remain genetically intact and no other sheep should be introduced to the islands (Boyd 1981).

3.2.5 Marine Life

The St Kilda archipelago and adjacent sea bed supports a variety of remarkable marine communities that reflect the geomorphological history of the area over the last 50-60m years and the highly unusual conditions that prevail. The intertidal and shallow subtidal areas are subject to extreme wave exposure dictating the composition of the seabed communities whilst the influence of the oceanic swell exceptionally is still felt at depths of 60-70m and is reflected in the composition of the animal communities present. Despite the relatively small spring tide range (3.0m), the extent of the upper intertidal communities is greatly extended as a result of wave splash with some species extending up to 100m above sea level. The remarkable clarity of these oceanic waters also has a significant bearing on the extent and distribution of the various communities of animals and plants. The sublittoral photic zone is greatly extended with large kelp plants occurring down to depths of 45+m and coralline red algae to in excess of 60m.

The awe inspiring towering sea cliffs and stacs including those below Conachair which at 430m are the highest sea cliffs in Britain, and the twin sentinels of Stac an Armin at 196m and Stac Li at 171m evoke powerful emotions. The rugged rocky underwater topography is equally spectacular – making St Kilda one of the top dive sites in Britain - and is a further legacy of St Kilda's Tertiary Period volcanic origins and more recently sea level changes that have occurred over the last 22,000 years. It is unusual for such extensive areas of relatively shallow bedrock to occur in such oceanic conditions. The exceptional clarity of the water enables the true splendour of this underwater landscape to be better appreciated than it might be in more coastal waters where underwater visibility is much reduced. The plunging vertical underwater rock caves, tunnels and gullies are festooned with marine life - a kaleidoscope of colour and form kept in constant motion by the Atlantic swell.

St Kilda is affected by the warmer water of the Northeast Atlantic Drift and particularly in winter water temperatures remain much warmer than those in the enclosed North Sea. This has resulted in a number of northern species reaching the southern extreme of their range and *vice versa*. This not only enhances the overall marine biodiversity of the archipelago but also represents an opportunity for future monitoring of the status of these species as an indicator of the impact of climate change on the marine environment.

Atlantic grey seals breed in small numbers in sheltered caves and coves, and 300-400 are present throughout the year. Cetacean sightings have increased in recent years probably because of more interest, better data collection and more observers experienced in identification. Most are made in the summer months May to August but some killer whales, porpoises and Risso's dolphins have been seen in the period November to March. Ten species have been sighted from St Kilda so far, all but one known to occur regularly off the Scottish west coast in summer. The exception was a Sowerby's beaked whale that was washed up in Village Bay on 29 Sept. 1994. Minke whale is the most commonly sighted species, mostly in ones or twos.

There have been two recent surveys that have comprehensively covered both the intertidal and subtidal habitats around St Kilda. The first was a survey conducted by Scottish Natural Heritage in 1997 that involved a complete mapping of the intertidal biotopes for all the islands and the main stacs, together with broadscale mapping of the sea bed in the areas adjacent to the islands using a RoxAnn acoustic ground discrimination system with ground truthing provided by scuba diver observations, underwater video and grab samples. A second survey was carried out in 2000 jointly by SNH and the Fisheries Research Services laboratory, Aberdeen that mapped the extensive areas of sea bed between the islands and a substantial area to the north-west of Soay. This survey employed a range of acoustic survey techniques such as RoxAnn, multibeam swathe bathymetry and side-scan sonar together with towed video and ROV and extensive grab sampling in the areas of soft sedimentary sea bed.

The marine environment around St Kilda is in near pristine condition with very little impact from any human activities. Anchoring is limited to a small number of visitors each year and concentrated on Village Bay where the soft sea bed provides good holding ground and results in minimal damage. There is only a very small amount of sporadic fishing in the area, largely using creels fishing for lobsters or crabs. The creels themselves result in negligible damage to the seabed and associated benthos and the catch taken is well within levels that may be regarded as sustainable.

3.3 Research and Studies

When the Nature Conservancy Council established its first nature reserves, it was with the declared intention that in addition to protecting and preserving interesting and important habitats, these places should become 'open air laboratories'. As a result permission has been granted over the years by the NCC (and its successors) for research work to be carried out on the flora and fauna of St Kilda. Inventories of flora and fauna have been exhaustively compiled by a succession of biologists in pre and post-war decades, with particular attention paid to seabirds and the Soay sheep.

3.3.1 Bird Studies

Systematic counts of the bird life of St Kilda started shortly after the evacuation in 1930. Harrisson and Lack counted the gannets and resident land birds in 1931, and there have been several counts since, summarised by Harris and Murray (1978) and Tasker et al (1988). The information has been updated with the publication in 2002 of *Birds of St Kilda* by Stuart Murray. The last full count of most species was in 1987. In addition to counts, studies have been made into the diet of the birds (Furness and Todd 1984) and the feeding areas used by them (Leaper et al 1988). The warden runs a series of seabird monitoring plots and the breeding success is monitored every year. In addition to this work, gannet eggs are sampled and analysed by SNH every two years for traces of pollutants and other residues.

3.3.2 Soay Sheep Studies

Most of the research carried out on St Kilda has been descriptive and observational in nature. This is mostly true for the sheep studies, although these at times have involved some

manipulation, including the creation of some very small grazing exclosures and manipulation of Soay sheep breeding and parasite load.

Research on the sheep started in earnest shortly after the declaration of the NNR. The first serious attempt to assess the numbers of the sheep was made by Dr John Morton Boyd in 1952 (Boyd 1956) when he established an effective method for their census. This was repeated from 1955 - 1958 and with modifications in subsequent years. Throughout the 1960s, the Soay Sheep Research Team censused the sheep population on Hirta and noted the 'boom and bust' cycle which has continued ever since. At the same time a team of vets studying the health, pathology and parasitology of the sheep, related the population dynamics to the mineral and metabolic stresses to which the sheep were subject in their closed island habitat.

Behavioural and botanical research continued into the early 1970s and culminated in the publication of *Island Survivors : the Ecology of the Soay Sheep of St Kilda* (Jewell et al 1974).

In the 1970s, scientists looked at the question of differential mortality between males and females and it was decided to castrate a cohort of male lambs. In 1978, 14 lambs were castrated, followed by 8 more in 1979. In 1980, a definite cohort of 50 castrates was created. Through this experiment, it was proven that the castrates outlived the rams and that their survival was also better than that of the females. While the castration experiment is perhaps the best demonstration yet of the effect of reproductive investment on lifespan in a free-living population, the project would not contemplate such a large-scale manipulation affecting reproduction again.

In 1985, Dr Tim Clutton-Brock, who had been carrying out work on deer populations on Rum, wanted to test his hypotheses on survival, fitness and individual reproductive success, on other species. The Village Bay population of Soays was suggested and a new phase of research was initiated. This was carried out by Clutton-Brock and the Large Animal Research Group (LARG) which continued to monitor the size and condition of the population on Hirta. During this research, the entire village population was caught and tagged.

A further aim of the LARG project was to investigate the factors maintaining the genetic and phenotypic diversity of the sheep. The sheep on Hirta also suffer from parasitic worms. This is thought to affect their survival and in 1988, 52 animals were treated with albendazole, an anthelminthic drug which aimed to treat the parasitic infection (Jewell 1994). The results of this experiment reinforced Jewell's earlier conclusion (Jewell et al 1974) that many of the deaths of sheep during the 'crash' periods were caused by starvation exacerbated by parasite infestation. Manipulation with Albendazole has been carried out on four separate occasions including the 1988 experiment. In 1988 and 1991 the purpose was to investigate survival rates. In 1995 the purpose was to study the process of re-infection and in 2001 the purpose was to investigate whether grazing behaviour was associated with parasite burden. On three occasions researchers have also temporarily prevented (using hormone treatments) small groups of animals from breeding, to investigate energy turnover due to sexual activity in the rut and to investigate whether attempting to breed affects winter survival.

In these and in other small scale manipulative experiments, and as a general philosophy, the research has manipulated a small proportion of the Village Bay population (itself being only one third of the whole island population) with a temporary treatment that is likely to have improved the lot of treated individuals as compared with controls. In addition these manipulations have been conducted in the run-up to expected crashes, when many individuals (treated and controls) have died and no lasting effects on the population demography are likely.

Soay Sheep research is now carried out by groups from seven UK universities and research institutes, co-ordinated through the Institute of Cell, Animal and Population Biology, University of Edinburgh. The seven centres are the Universities of Cambridge, Edinburgh, Stirling, Kent (at Canterbury) and Imperial College London, and the Centre for Ecology and Hydrology, Banchory and the Macaulay Institute, Aberdeen. An annual report is prepared by the Institute and shared with the Trust and SNH.

3.3.3 Coastal Erosion

The ferocity with which the Atlantic waves pound the shores of St Kilda result in a high level of coastal erosion over time. This has been left to occur with no interference, with one exception.

In tandem with the improvement of landing facilities for the Army on St Kilda, a set of gabion baskets was constructed with the approval of the Trust and the NCC, on a short stretch of the shore in Village Bay close to the pier. This work was carried out in 1963 (although this date is uncertain) by the Army in an attempt to reduce erosion of the area close to a set of pipes associated with their generating station.

Although the gabion structure has generally reduced local erosion, there have been problems at the ends of the structure where the erosion, has if anything, been intensified. In 1993 the Army requested permission to repair and extend the gabion wall. Permission for the extension was denied by SNH who felt that the design of the structure was itself a source of the problem. Permission was however given in 1996 to carry out some essential repairs.

The predictions of global warming indicate that both the sea level will rise and there will be increased storminess, so that erosion rates may increase. Predictions for the Western Isles show a sea level rise of between 0.2 and 1.4m by 2100, with the “best estimate” at 0.34m. Early in 2002 severe storms damaged the jetty, the gabion walls and also the unreinforced shoreline, sweeping away a part of the sub-surface archaeology and leaving the Store building at particular risk. This had led to a re-assessment of this problem and the development of an on-site study during the life of this Plan with an immediate short-term aim, and to start a long-term review of the coastal management of the 500m length of coast in front of the army base in Village Bay. The study aims are to provide:

- Guidance on minimum engineering requirements needed immediately to safeguard all structures.
- An initial assessment of the impact of a range of different management scenarios:

    1. Do nothing
    2. Do minimum (i.e. maintain and repair the existing defences).
    3. Upgrade defences to prevent any further coastal erosion along this 500m section (i.e. extend, replace or otherwise improve the existing defences to safeguard all buildings and structures for the next 25 years).
    4. Remove all current sea defences, and allow natural coastal processes to operate.
    5. Remove all sea defences, but protect the Store from further erosion.

As a first step, a coastal erosion study involving the Trust, SNH, QinetiQ and the University of Glasgow, took place on site in September 2002.

4. Cultural Heritage

4.1 Introduction – The Cultural Landscape

The importance of the cultural heritage of St Kilda arises mainly from the extraordinary post-medieval remains coupled with good supportive documentary evidence. For the most part the archaeological record relies on the remains still visible on the ground, although a few relatively small-scale excavations have also taken place.

As well as including the ruined remains of structures and their underlying deposits, for the purposes of this Management Plan 'archaeology' is taken to encompass all evidence of the

impact of man on the St Kildan environment from the earliest times to the time of the Evacuation and beyond.

The following description of the archaeological resource is merely a summary of the most pertinent features, and is thus far from exhaustive. A more detailed introduction to the built heritage of St Kilda can be found in *Buildings of St Kilda* by Geoffrey Stell and Mary Harman (1988) which arose out of several years of intensive field survey and observations coupled with documentary research. Further research resulted in the most detailed publication to date - *An Isle called Hirte – A History and Culture of St Kilda to 1930* (Harman, 1997).

Management of the cultural heritage of St Kilda over the next five years will be co-ordinated through an *Archaeological Management Agreement*, with secured funding from Historic Scotland for its implementation. Archaeological research will be developed through the work of the St Kilda Archaeological Research Committee, which will develop a research agenda for the islands' cultural landscape.

4.2 Documentary Evidence

From the writings of early visitors to St Kilda, such as Monro in 1549 and Martin Martin in 1687, the way of life on St Kilda has been remarkably well documented. Other key works include Macaulay's *History of St Kilda* (1764) and the writings of Rev. Neil Mackenzie from 1829-1843. Illustrative material by Sir Thomas Dyke Acland (1812) and Sharbau's plans of 1860 are immensely useful in clarifying the texts, and Captain Thomas' sketch of Black house K in the 1860s is also revealing. To these records must be added the remarkable photographic archive for St Kilda, which documents the life and times of the inhabitants from about 1860 to the Evacuation and beyond. These documents, illustrations and photographs – as well as oral records - have allowed the flesh to be put on the bones of the archaeological evidence, and have been drawn upon extensively to support the interpretations in the following descriptions.

4.3 Collections

In 1989, the Trust entered a ten-year agreement with the Department of Archaeology, Ethnography and History, Glasgow Museums and Art Gallery, based at Kelvingrove. This agreement ensured that artefacts from St Kilda owned by the Trust would be retained in a collection at the Kelvingrove Museum where they are inventoried. The Museum is responsible for the care and storage of the objects and endeavours to maintain them in a satisfactory condition. There are also many other collections of objects and samples from St Kilda cared for by museum services, archives and individuals. All of these form part of the cultural resource associated with St Kilda and are fundamental to continuing research.

4.4 Archaeological Remains

4.4.1 Early Prehistoric

Macaulay (1764, 53) reported the existence of a stone circle at Tigh Stalar, Boreray, describing a typical Late Neolithic example. In 1876 Sands (1878, 76), could find no trace of this structure which, if it did indeed exist, would represent the earliest known human occupation on St Kilda. The Rev. MacKenzie wrote of grassy mounds, the "abode of fairies", which overlay stone cists sometimes containing bones and mostly containing coarse pots (MacKenzie 1911, 6-7): these burial mounds, which were cleared away in the 19th century, might be of Early Bronze Age date; one survival of which may be the underground cell in the lower meadow of Village Bay (NF 10129922). The 'boat-shaped' settings examined by Cottam (1973) and more recently (1994) at An Lag above Village Bay were traditionally thought of as pre-historic burial sites, but that interpretation and date is now questioned. It is now more generally accepted that the period and function of these settings is unknown.

4.4.2 Iron Age

The Iron Age in the Hebrides could be argued to extend into the 18th century, but for this Management Plan will be considered to stop in the wake of Viking influence. Some of the structures at Gleann Mór, including the Amazon's House (seen by Martin Martin in 1697), have affinities with the building tradition of the Iron Age in the Western Isles and could therefore represent the earliest surviving domestic buildings on St Kilda. The horn-shaped protuberances on some of the Gleann Mór structures have been termed 'gathering folds' and probably date from more recent times. There are also possible hut platforms at Geo Chrubraidh, overlooking Glen Bay, and at Claigeann an Tigh Faire (NF 08369927).

The presence of two or perhaps three souterrains (underground structures) is also suggestive of Iron Age activity, the example known as Tigh an t-Sithiche (House of the Fairies) at Village Bay having been excavated no less than four times, with some success in terms of producing dating evidence. Over 30 cm of peat ash and soot covered a paved floor with a drain beneath, and finds included: coarse pottery, some of Iron Age type; hammer stones; stone loom weights or net sinkers; querns; stone lamps; shells; animal bones; and a Viking iron spearhead. Stone tools have also been found recently at An Lag and elsewhere, but they are not specifically diagnostic. However, pottery excavated in the late 1980s has been dated (by thermoluminescence) to AD90-360, confirming activity on the islands at this time.

Since 1998 excavations on the screes below Mullach Sgar have located the remains of structures containing Iron Age pottery. One such structure, previously entirely hidden in the scree, survives to almost 1.5m in places. For the first time, evidence has been produced to indicate the working of stone tools in the Iron Age, although they would have been produced much earlier in the prehistoric period. The tools would have been used in agriculture, as digging points or ards – the tips of ancient ploughs.

Such stone tools are found in abundance on Hirta, particularly around the areas that were once fields, and were often reused as pinning stones in cleits and other structures. Such tools were found when excavating the souterrain and are similar to those from the Northern Isles, where they are dated to the earlier prehistoric period. Work in the late 1990s showed that several areas above the screes of Mullach Sgar were used for quarrying the stone for these tools. It also showed that a surprising amount of quarrying had taken place on the high ground between Mullach Sgar and the slopes of Conachair. Indeed, the apparently glacial deposits in this area may turn out to be partly human in origin – spoil heaps from quarrying.

4.4.3 Viking/Early Medieval

The 'boat shaped' appearance of the twenty or so settings at An Lag might have been expected to be of Norse origin, but the form of these stone settings is not sufficiently boat-shaped overall and their date is actually unknown. Nevertheless, several finds of Viking date and Norse influence have been found on Hirta. These include two Viking brooches of the 9th or 10th century, the Viking spearhead found in a souterrain, and a Viking sword. Recently excavated finds of steatite were probably brought from Norse Shetland, while pottery has been dated by thermoluminescence to AD1135-70. The Early Christian grooved crosses[1] that are built into House 16 and Cleit 74 are thought to show some Norse influence, but the presence of various Scandinavian-type place-names is an even better measure of this strong influence on the islands, which probably extended to the end of the 13th century.

4.4.4 Medieval

The core of settlement on Hirta is likely to have moved over time. One of these sites is thought to have centred on an area at and just above the present head dyke, and is featured on a sketch of 1812 by Sir Thomas Dyke Acland. Martin (1698) records that the well named Tobar Childa was

[1] Some parallels have been found to suggest that the crosses are early Christian, and others that they are Norse. The evidence is not conclusive as to whether they are one or the other (Mary Harman, 1986)

near the village, and Macaulay (1764, 42) describes the layout of the settlement. Recent research has identified another likely site for the settlement at some time prior to 1830. The 'tolerable causeway' between the houses may still be relict within the grassy terraces in this area, while the patchwork of small, irregular enclosures in this area may have been contemporary with the medieval settlement. Nevertheless, a recently discovered sketch of the village in 1831 shows that the buildings stretched down to the shore, and platforms from these structures have now been noted crossed by the Consumption Dykes.

All but one of the medieval houses are thought to have been removed when the village was replanned in the 1830s, but a few remnants may survive, including some houses converted into cleits. Calum Mor's House - a 'beehive' type structure but with external turf insulation giving a mound-like appearance – may well be the sole complete survivor. Further reasons for the poor survival of medieval structures could be the re-use of stones for dyke and cleit building, but also, as MacKenzie (1911, 20-21) records, when new houses were built, old ones were usually removed. Outlying settlements and areas of cultivation and enclosure of this period can be found at Ruaival, while some structures at Gleann Mór may have been re-used and new ones built as shielings.

Three chapels are said by Martin Martin to have existed on Hirta: Christ's Church, probably where the current burial ground stands; St Brianan's at Ruaival; and St Columba's at the western fringe of the village area. A further chapel or 'teampull' once stood on Boreray (Kennedy and Thomas 1875, 705) but by 1862 was represented only by a single inscribed stone (Mathieson 1928, 130). The oval graveyard which was used until the 20th century may well be of medieval origin, associated with Christ's Church, but the scatter of small headstones leaves few clues as to who was buried there and when.

Martin (1753) describes seasonal shelters or bothies used during the seafowl harvesting on Stac Lee. However, the most common type of small structure is the cleit, of which about 1260 have been recorded on Hirta, and more than 170 others on the outlying islands and stacs. Cleits are drystone structures of round-ended rectilinear form, with drystone walls and a roof of slabs covered with earth and turf. Within this basic plan are numerous variations of door position, and some examples (which may have been converted from earlier dwellings) even include integral adjoining cells.

Cleits were usually used to store materials, and their generally open wall construction was designed to allow a through-flow of air. They were used to store birds, eggs and feathers, and harvested crops as well as peat and turf which were both used as fuel.

4.4.5 Early Modern Buildings and Blackhouses

The first main deviations from the original style of building of the St Kildan structures were the construction of the storehouse (or Featherstore – now referred to as the Store) c. 1800 and certainly before 1818, and the church and manse to plans of 1826. The storehouse is a two-storey gabled structure which was used to store commodities gathered as payment in kind for rent. The Church is a relatively plain two-bay oblong structure built in 1826, a schoolroom being added on the NW side in 1898/1900.

In an effort to provide more up to date accommodation, the Rev. Neil MacKenzie instigated a move from the old village core to a laid out string of blackhouses, mostly end-on to what is now known as The Street. These structures, 24 of which survive fairly intact, were mainly built in the 1830s, from about 1834, but one example (Blackhouse E) possibly dates from as late as the 1870s. The blackhouses were of the usual Hebridean plan, being rectangular, thick-walled and with rounded external corners. The roofs were thatched with barley straw, some later gabled, and if they had windows they were glazed. There was a single entrance, used by both animals and people, and the lower end was used as a byre. A plan published by Thomas in 1870 showed how the living quarters were laid out, some examples including a crûb or wall-bed - a feature carried on from the medieval building tradition. Several variations on the general plan can be seen,

including the recently excavated kiln-barn Blackhouse W, and the conjoined Blackhouses M and N.

At the same time as the building of the blackhouses, the fertile plain of Village Bay was divided into numerous radial plots, most of which are still evident through dykes, cultivation lynchets or lines of stones. The head dyke, into which pre-existing cleits and other structures were integrated, was probably also built in the 1830s, as was the dyke along the lower edge of the croftlands, by the sea.. Around the blackhouses are enclosures, some of which may define small gardens, and MacKenzie refers to adjacent manure pits which are no longer visible. Small circular gateless enclosures within the head dyke form 'planticrues', used to shelter growing crops of kail or cabbages. The An Lag enclosures, the date of which is unknown, might also have been exclosures where vegetables would have grown in this relatively sheltered location without being eaten by the livestock.

4.4.6 19th-century Houses

After a damaging hurricane in October 1860, the opportunity was taken to further improve the living accommodation in the village. Construction of the row of sixteen houses strung along the Street started in 1861.

The sixteen houses erected were lime mortared, gabled and chimneyed. Of a standard Scottish north-west Highlands three-roomed design, these buildings are quite different from their predecessors; they face seaward, not end-on to the bay, and have a hard rectangular outline of mortared stone and chimneyed gables. Their roofs were covered with zinc plates nailed down to sarking boards as a security against the wind, but some plates were too short to cover the whole roof and all were apparently prone to condensation. The zinc was subsequently replaced by tarred felt held down by spikes and stays, and at some stage the external walls were rendered, to give added protection from the gales. In 1898 the houses were provided with new floors, one or two rooms having concrete, the others having timber. Set into the slope, most of these houses have a revetted drainage ditch at the rear, a common Highlands feature.

The construction of these houses caused modifications to the building pattern on the street frontage, but most new structures appear to have been fitted into the gaps between the blackhouses. While most of the blackhouses were only used as byres, one or two, such as Blackhouse X, were still used as dwellings after the construction of the new houses. A good deal is known from documentary and photographic evidence about the layout and functions within the houses, and this has been supplemented by the excavation of houses 6 and 8 in the late 1980s.

The present Factor's House was probably also built in the 1860s. This building was used by the Factor during his annual visits to collect the rent, as well as for accommodation for the nurse and certain other visitors to the islands. It stands towards the lower end of the street, close to the church and manse. Built on common ground, it is of a conventional mainland type with one and a half storeys and a projecting front porch.

Marked on Sharbau's plan is a structure described as a 'mill erected in 1861' although it is not known whether this was a grain mill which had a working existence. It is not evident today.

4.4.7 Early 20th-century to the Evacuation

The addition of the schoolroom to the church occurred between 1897 and1900, and fragments of writing slates found in recent excavations may date from around that time. The slipway and jetty were built in 1901, and the naval gun and ammunition store were added in 1918 in response to a German U-boat attack which destroyed the communications mast in front of the Factor’s House, left the Store in ruins and various other buildings damaged to a greater or lesser extent. Excavated finds show that while the islanders' tastes became more developed as tourism brought in a little extra income and contact with the outside world, their life remained comfortable but basic.

4.4.8 Post-Evacuation

Following the Evacuation in 1930, the buildings of St Kilda began to deteriorate fairly rapidly, and within ten years most were roofless. In 1957 the Air Ministry re-occupied the manse and Factor's House, repaired the church, and built a block of Nissen huts. At about this time the road to the top of Mullach Mór was built, using material quarried from the side of the hill. The present MoD buildings were occupied after 1966, and the radar facilities on Mullach Mór and Mullach Sgar have gradually developed over the last 35 years.

The remains of several aircraft are to be found on St Kilda. A Sunderland flying boat and her crew of 6 New Zealanders, 1 Australian and 3 Britons crashed in Gleann Mór in June 1944 while on a night operational flight from Oban. All crew members died in the crash and the wreckage was later dismantled and buried by the RAF in the summer of 1944. A Beaufighter, based at Port Ellen on Islay, crashed on Conachair on 3 June 1943, also during a night flight. Most of the wrecked fuselage plunged over the cliffs and no bodies were ever found. A Wellington Bomber also crashed at St Kilda - smashing into Soay in February 1943 during a routine navigational flight from Stornoway.

All of these aircraft are treated as archaeological remains in the same way as the various wrecks around the islands (Ridley 1983), ranging from a supposed galleon site in Geo Chaimbir, to a trawler in Geo Chruadalian. Most recently, the *Golden Chance* was lost in Village Bay in 1981 – no-one was aboard and no lives were lost. Although not commonly used, and indeed not currently used at St Kilda, such remains could be protected under the Protection of Wrecks Act 1973 that would afford them statutory protection.

4.5 Scheduled Ancient Monuments

Extensive areas of Hirta have been scheduled as nationally important ancient monuments. The largest is a tract of the Village Bay medieval and later settlement, but excluding the structures associated with the MoD base. It stretches from the enclosures at An Lag to the activity area and the supposed site of St Brianan's Church at Ruaival. The cluster of structures and dykes at Geo Chrubaidh, and the cleits and possible structure at Claigeann an Tigh Faire, between Mullach Bi and Claigeann Mór are also scheduled. In addition, a large swathe of Gleann Mór has been scheduled, including the Amazon's House and associated 'horned' structures.

4.6 Archaeological Importance

The archaeological remains of St Kilda are recognised as being of international importance, and hold many clues about the way of life of the islands' former inhabitants. The general crudeness of pre-1834 buildings and artefacts makes it difficult to separate prehistoric sites from medieval or even later examples. Nevertheless there is ample evidence for occupation from the Late Neolithic or Bronze Age onwards, and the potentially Iron Age remains in Gleann Mór are of particular value in that they are largely complete, although altered during the medieval period and partially investigated in the late 1950s. The Viking period is less well represented, with no upstanding surviving evidence for long-term occupation (although many of St Kilda’s place names are a legacy from this era). However, St Kildans somehow managed to thrive in medieval times, with a population approaching 200 in the late 17th century. These medieval remains are still abundant and, combined with the first-class documentary information that has survived, detailed analysis and investigation will provide further invaluable data.

The 19th and early 20th-century archaeological record for St Kilda is almost uniquely detailed, and provides an astonishing insight into the everyday life of the inhabitants. The blackhouses and the later houses forming a necklace of structures along the Street, are basically complete and fundamentally unchanged, yet they are fragile in terms of the storms which ravage these islands, and demand constant attention to prevent their rapid deterioration.

In the same way as the gun beside the storehouse is a reminder of the events of 1918, so the present MoD base is very much part of the history of St Kilda. As such, the base and other MoD installations must be looked upon as potentially the archaeology of the future, and careful consideration should be given to their fate.

4.7 Archaeological Fieldwork

Archaeological observations on St Kilda began as early as the 1830s. During his agricultural and housing improvements, Rev. Neil Mackenzie noted the presence of:

> *'very numerous … green mounds called 'cnocan sithichean', which were looked upon as abodes of fairies. These were all removed in the course of agricultural improvements. They were composed of stones mixed with a little earth to a depth of two or three feet. At some distance below this layer were stone coffins formed in two different ways. At times they were formed of four flat stones set on edge and covered by a fifth. At other times both the sides and roof were formed of several stones set in the same way. These were seemingly of different age from the former. In a few of them bones were found, and in nearly all of them pieces of earthen vessels.'*

The very first St Kilda Work Party, in August 1958, decided to investigate the remains of Gleann Mor and elsewhere on the islands:

> *'Set off with sandwishes up the road to the Col and down into Gleann Mor with Prof. O'Dell to examine the beehive dwellings. We took spades and crow-bar with us. Started work on digging out the floors of the buildings. The Amazon House is the best preserved of the buildings – described in detail in the Scottish Field by Ken Williamson. We dug down carefully in several houses but came on nothing of interest.'*

This and other early Work Parties occasionally felt the urge to undertake small-scale excavations, but detailed records of these events, if they ever existed, are now lost. Certain early efforts related to the souterrain, where unfortunately contemporary techniques succeeded in destroying some extremely important information. More recently, the excavation of the floor deposits of House 6 in advance of development has produced useful results, as has the examination of House 8, Blackhouse W, and a rubbish pit behind House 7 and Blackhouse G. The results of these excavations of 1986-90 were published in 1996 as the first in a series of monographs on the archaeology and ethnography of St Kilda.

Following detailed survey and geophysical work by Glasgow University at various sites around Village Bay, excavations took place between 1993 and 1995. These were at Ruaival, on the agricultural strips and possible structures above the enclosures, as well as at An Lag on the agricultural strips and the 'boat-shaped' settings here and higher up at The Gap. Palaeo-environmental research by Durham University has examined the pollen and other remains from a transect through Village Bay, as well as looking at the evidence for plants grown in the planticrues, where the use of medicinal plants has been revealed. The results of these studies are due to be published in the second archaeological research monograph.

Since 1995 studies have concentrated on the screes below Mullach Sgar. Lampeter and Sheffield Universities have published progress with their research into the quarry sites that were used to produce the stone tools of St Kilda (1996 and 1999*).* These tools were used extensively on the island throughout the prehistoric period. Excavations of quarry material have shown that the landscape below Mullach Sgar and above the village has been substantially modified by human activity. Glasgow University have recorded and excavated structures within the scree below Mullach Sgar, while on the terrace below a 'horned' structure, similar to some found over in

Gleann Mor, has been examined Investigations are now in progress nearby on part of an Iron Age building, the excavated part surviving in places to almost roof height.

Since 2000, analysis of the chemistry of the soils on Hirta has been undertaken by Aberdeen University. Preliminary studies have shown that the use of seabird carcasses as a major ingredient of manure in the village fields may have created fertility problems in the longer term.

4.8 Archaeological monitoring and management

For the years 1996-2001, the Archaeological Management and Research Plan was implemented. As part of the work contained in this plan, a seasonal Archaeologist, part funded by Historic Scotland, carried out condition surveys and extensive monitoring of the built structures on the islands on an annual basis. This work resulted in a variety of reports and included recommendations relating to the maintenance of the graveyard, the cleit roofs and the ruined houses and blackhouses. Monitoring was also regularly undertaken, particularly around Village Bay where there is risk from coastal erosion. Drawing this wealth of knowledge together, an Archaeological Action Plan for 2002-2007 [see Appendix H] was drafted to ensure that appropriate monitoring and management of the built structures on Hirta by the St Kilda archaeologist continues. This information is also being used to direct building maintenance work, by helping to determine priorities for repair or maintenance. A new Management Agreement with Historic Scotland 2002 – 2007 (Appendix G) sets out conservation and monitoring works for the SAMs on Hirta.

4.9 Building Maintenance

The 2003 season will be the forty-fourth consecutive year when St Kilda Work Parties have assisted in the conservation of St Kilda. In that time many of the buildings and dykes have been repaired and thus altered to some degree. In order to know what is original and what has been changed, a project is underway to properly document the work of previous Work Parties, to produce a conservation history for the structures of St Kilda.

Over the years the Store and six houses have been reconstructed so that they can be used by researchers and Work Party members for accommodation, etc. The houses have been re-roofed and externally fitted out – very largely in accordance with their original appearance. They have been fitted out internally for modern needs but in a way that is reversible. All other buildings, cleits and dykes in the Village Bay area are currently being maintained in their current state of repair, with minimal intervention. Annual maintenance is important in this area to ensure visitor safety, as these are the structures most often entered by visitors. Other structures on the islands will be maintained where possible (given time and other resources) with priorities set using the information from the condition survey outlined above.

4.10 Archaeological Research Design

4.10.1 Archaeological Management and Research Plan (AMRP)

Following the exemplary surveys by RCAHMS and Mary Harman (1988), it has been possible to consider the fate of the built environment from a position of knowledge, as outlined in the Archaeological Management and Research Plan (1996-2000). The Plan has guided archaeological and allied research on St Kilda and provided a context within which all work on or affecting archaeology on St Kilda will be undertaken. Proposals for a new research agenda will be brought forward by the St Kilda Archaeological Research Committee (see Appendix I), while management issues have already been agreed with Historic Scotland (see 4.8).

4.10.2 St Kilda Archaeological Research Committee

The St Kilda Archaeological Research Committee co-ordinates archaeological research work on St Kilda. The Committee, formerly the St Kilda Excavation Committee, is chaired by Robin Turner (Trust Senior Archaeologist) with Jill Harden (Trust Highlands and Islands Archaeologist) as secretary. The membership at the end of 2002 was: Colleen Batey (Glasgow Museums Service), Mary Harman, Jacqui Huntley (Durham University), members of Glasgow University's Archaeological Research Division, Mary Macleod (Comhairle Nan Eilean Siar Archaeologist), Andy Meharg (Aberdeen University), Jack Stevenson (RCAHMS), Andrew Fleming (Lampeter University), and an observer from Historic Scotland. The Committee meets twice a year to discuss present and forthcoming archaeological research on St Kilda, including that arising from archaeological resource management.

5. Landscape

The archipelago of St Kilda is renowned for its spectacular landscape which has been reflected in its designation as a National Scenic Area. Descriptions of the islands are often dotted with superlatives, reflecting the range of emotions stimulated by the landscape of St Kilda. The underlying topography of St Kilda is dramatic, combining sheer cliffs, grassy terraces, rounded tops, open valleys and bays, and spectacular sea stacs (as described in Topography section). But while the scale and variety of this physical topography is breathtaking, other factors are also important in giving the landscape its unique qualities. The history and culture of the St Kildans, the severity of the climate and the ferocity of the Atlantic waves, the teeming bird life and the very isolation of the archipelago are just some of these factors.

For most visitors, the fascination of St Kilda lies in the combination of spectacular natural phenomenon linked to the almost tangible atmosphere of the remains of human settlement. The remains of these buildings, cleits and walls erected by the now absent St Kildans, are a very influential feature of the landscape, providing as they do a physical link to the existence of the people. They provide the imagination with an idea of how the St Kildans might have lived, reliant on the natural resources of the islands and challenged at every turn by the isolation and climate of the place.

Juxtaposed against these poignant remains are the Army camp buildings in Village Bay, the masts and radomes of the radar sites on Mullach Mòr and Mullach Sgar, and the remains of the quarry opened to extract road building materials. These provide a startling reminder of the presence and influence of modern man on St Kilda and many visitors are struck by their incongruity in such a setting.

The most common way of reaching St Kilda is by boat and the views of the archipelago from a vessel moving between the stacs or around the cliffs, reinforces the dramatic impacts of its islands. The sheer scale of the islands arouses many of the emotions which are associated with their landscape and which give St Kilda its special 'spirit of place'.

6. Access

6.1 The Trust's mandate

The right of free access to St Kilda for the public was embodied within the 1957 Minute of Agreement between the Trust and the then Nature Conservancy Council as follows :

> *"There will be reserved to the Trust, their members and members of the public an unrestricted right of access to the islands..."*

Given the importance of St Kilda in natural and cultural terms, the question of access has been revised since 1957 to emphasise that access to the islands must be at an appropriate level and that it should not impinge on the nature conservation or cultural interests of the islands. In 1974 it was agreed at a Trust meeting that the long term approach of the Trust on St Kilda should be:

> *"to provide greater access to the islands for a limited number of people without prejudicing the conditions of the lease to the NC nor the sublease to the MoD, and the artefacts of the islands" (Trust archives. Meeting 18.11.74).*

Although this decision was not made in a Council meeting and was thus not official Trust policy, it provides a useful insight into the management rationale adopted for the islands at that time. This rationale has largely continued and thus public access is available but not widely promoted to try to maintain visitor numbers at a level which is not detrimental to the conservation of the islands. The main principle of the Access Policy is that whilst there will be unrestricted access to the islands, overnight accommodation will only be granted within the permanent accommodation available to SNH and the Trust, except by their prior consent and agreement.

Hirta, with its harbour and human presence, is the most easily accessible island in the archipelago and is the most frequently visited. Under Trust Bylaws for the islands permission from the Trust Representative in the island is required for access to parts of the islands outwith the Village Bay area (Bylaw 2). Requests for access to the other islands and stacs of St Kilda in particular require careful consideration given the difficulties in landing, the steep nature of the terrain and the burden placed on the distant coastguard services on the Western Isles to provide rescue services in the case of accidents. Also, the wildlife on these other stacs and islands is less used to humans and as a result may be more vulnerable to human disturbance.

Within this context, visiting cruise ships and yachts are welcomed to Hirta and although there is a site for 6 people to camp in the Village Bay area, prior permission for this is sought by individuals concerned, so that numbers can be managed.

6.2 Work Parties

In line with its wish to provide opportunities for access to St Kilda, the Trust also organises annual Work Parties. These were started in 1958 with 2 groups of 12 people visiting the island, each staying for two weeks and carrying out work for the Trust during their stay. Over the years the number of parties per year has increased to 6 or 7 – nowadays each travelling to St Kilda by boat from Oban. During their two week stay they either carry out a programme of maintenance and repair of buildings and other structures on Hirta, or they are involved in archaeological research. Early parties lived under canvas, but the wind and damp conditions on the island suggested a move to more suitable accommodation and consequently four of the 1860s houses were restored by Work Parties to provide dormitories, kitchen and workshop. Other work included restoration of the Kirk and the Schoolroom, and the conversion of two additional houses for interpretation purposes.

In addition to the restoration of buildings, Work Parties have consolidated and repaired many other structures on the islands such as cleits and dykes. As the Trust's experience with the Work Parties and the type of work they are capable of carrying out increased, a conservation methodology gradually evolved. All work currently carried out by the Work Parties is carefully planned by one of the Trust's Highlands and Islands Building Surveyors and the Highlands and Islands Archaeologist, and overseen on site by the St Kilda archaeologist.

Nowadays, two of the Work Parties are dedicated to archaeological research work. These are led by experienced archaeologists and provide opportunities for participation by both archaeologists and the general public. The work done by these parties is an important contribution to the Trust's increasing knowledge of the islands' archaeology.

All of the Work Parties which the Trust sends to St Kilda are there with a dual purpose: to carry out some work of value to the Trust; and to holiday on the island. Thus they generally work a 24 hour week (a 36 hour week for archaeological Work Parties), allowing ample time for party members to explore Hirta.

The Work Parties at present (2002) are part funded by Historic Scotland, the St Kilda Club and the participants themselves. Any additional costs are met with money from the Property Reserve Account. Over the years, the Trust has derived a huge benefit from the work carried out by the Work Parties - approximately 4000 hours per season - a benefit which should also be kept in mind when considering the 'balance sheet' associated with the Work Parties.

There are, however, often problems associated with the Work Parties, which relate to time and continuity. Due to unpredictable weather, being unable to work in the conditions may waste time. With archaeological Work Parties, members have to be trained in excavation techniques and this time has to be allowed for in the work schedule.

6.3 Cruises

The Trust has been organising cruises around the coastlines of Britain and Europe for over forty years. These cruises have regularly circumnavigated St Kilda when this has fitted in with their itinerary.

Other cruise and charter boat companies regularly visit St Kilda and often land their passengers on Hirta. These visitors contribute significantly to the total number of visitors to St Kilda each year. Their impact is usually confined to the Village Bay area, although this will be kept under review.

6.4 Climbing and Diving

The cliffs and stacs of St Kilda have long been an attraction for climbers, and the spectacular underwater topography, visibility and marine life combine to provide divers with some of the highest quality dive sites in Britain.

The cliffs and stacs of St Kilda are formidable obstacles, reaching over 300m in height in a number of places. The sea-cliff of Conachair is, at 430m, the highest of its kind in Britain. The native St Kildans climbed the cliffs as a matter of course, to harvest the birds and eggs which were a staple part of their diet. Men climbed as a team, Alpine style, using ropes made from plaited horsehair, and either wearing thick socks or climbing barefoot.

One of the earliest climbs by a visitor to the islands was recorded in 1883, when a botanist, R M Barrington, climbed Stac Biorach on Soay. He described the climb in Volume 27 of the Alpine Journal. In 1898, another naturalist, Norman Heathcote, visited the islands with his sister and during their stay climbed Stac Lee.

More recently, in 1969 a party including Dick Balharry and John Morton Boyd made several successful climbs during a visit to the islands. These included Boreray, Stac Lee and Stac an Armin, which at 196m is the highest sea-stac in Britain. Landing on Stac an Armin is the difficulty, in this case, as the climb itself is reported to be straightforward.

In 1987 the Trust gave permission for a rock climbing visit by a party of ten climbers led by Chris (now Sir Christian) Bonnington, and sponsored by Independent Television News. The group pioneered a total of 19 routes on the Conachair cliffs including one aptly called 'Edge of the World'. These climbs were graded E5 to E6b in terms of their difficulty.

Given the difficulty of the climbs, the lack of any rescue or medical facilities on St Kilda and the risk of disturbance to nesting bird on the cliffs, climbing on St Kilda is not permitted without the express permission of the Trust. This is stated formally under the St Kilda Bylaws (No 10). Permission has not been granted for several years. As part of the process of implementing this Management Plan, the Trust will liaise with SNH and the Mountaineering Council of Scotland to review whether any change is merited to this position.

Divers are attracted to St Kilda because of the spectacular underwater landscape of caves and tunnels, the clarity of the water and for the sheer quality of the diving experience the archipelago has to offer. Ridley (1983, 1994) has published guides to the dives around St Kilda, including a small number of spectacular dives from Boreray, Dun, Soay and Stac Lee. Some of these are included in Quine (1995). Given the equipment required and the necessity for diving parties to have their own support vessels, diving around St Kilda is often an expensive activity and has to be well organised. At current levels there are no undue pressures imposed on the marine environment from the visiting yachts and scuba divers. The remoteness of the islands and the high level of competency and experience needed to safely sail or dive around St Kilda acts as a natural control on any potential pressure.

6.5 Visitor Management

6.5.1 St Kilda Warden

The main role of the Warden on the islands is to co-ordinate the activities of the Trust, SNH and the base. Other duties include liaison with Work Party leaders and leaders of other visiting parties, monitoring of birds and other wildlife and contact with all visitors to the island to ensure that they observe the Bylaws. A monthly report, compiled by the Warden, is sent to SNH and the Trust Regional Office.

6.5.2 St Kilda Archaeologist

Since 1996 an Archaeologist has been employed on St Kilda in the summer months to oversee work on the Archaeology Management and Research Plan. This person is appointed and paid by the Trust with grant-aid from Historic Scotland and, in addition to archaeological duties, also assists with visitor management.

6.5.3 Bylaws

A set of Bylaws (see Appendix D) was enacted by the Trust in 1971, prompted by increasing numbers of visitors to the islands at that time. The Trust is able to instigate these Bylaws under Section 33 of The National Trust for Scotland Order 1935 (confirmed by The National Trust for Scotland Order Confirmation Act 1935) and by Section 4 of The National Trust for Scotland Order 1961 (confirmed by The National Trust for Scotland Order Confirmation Act 1961). They were approved and signed by the Secretary of State for Scotland on 21st April 1971 and took effect from 21st May 1971. Their aim is to protect St Kilda against vandalism to the buildings and to minimise damage to the flora and fauna. They are also designed to try to reduce the risk of injury or accident to visitors to the islands.

Copies of the Bylaws are circulated to all Work Party members before their visit, and a copy is also mounted on a notice board on the pier in Village Bay. All visitors to the island are instructed to read the Bylaws and are advised to adhere to them. Clause 19 outlines the penalties which can be applied by SNH if the Bylaws are contravened.

6.6 Guide Books

A St Kilda Handbook was published by the Trust in 1979 and was reprinted in 1986 but has not been reprinted again as other books have superseded it. 1995 saw the publication of *St Kilda* as part of the Colin Baxter Island Guides series, written and illustrated by David Quine, with photographs by Colin Baxter. It provides a colourful and informative guide to all the main islands of the archipelago : Hirta, Soay; Dùn; and Boreray and its stacs. A series of walking routes are suggested for each and are accompanied by descriptive and historical information. Useful appendices in this publication include a comprehensive chronology of St Kilda, checklists of the plants, birds and rocks of the islands, and a bibliography.

6.7 Signs and Leaflets

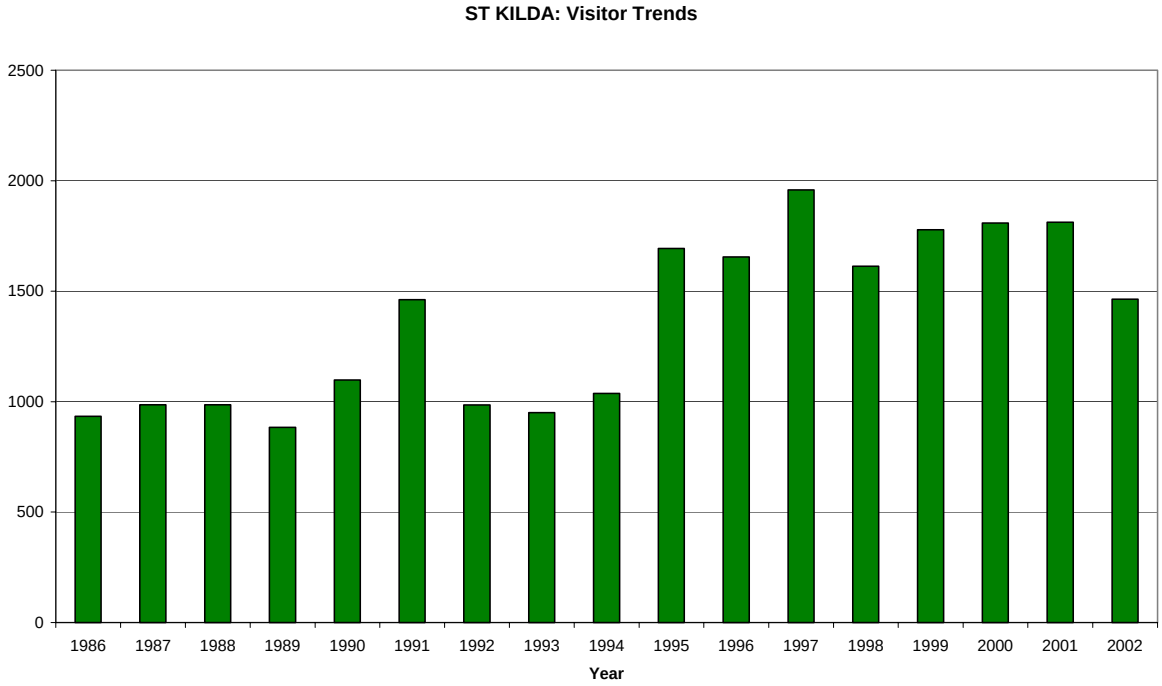
Scottish Natural Heritage have ‘re-signed’ many of their National Nature Reserves, including St Kilda. A sign has been erected at the top of the slipway to welcome visitors, to give them basic orientation and to provide information about the NNR. In addition, SNH has prepared an information sheet on St Kilda which is available to all visitors. This concentrates on the natural heritage of the archipelago. The Royal Commission on Ancient and Historic Monuments Scotland (RCAHMS), in conjunction with the Trust, has produced (1998) a very useful leaflet on the cultural history of the islands.

6.8 Shop

The St Kilda Club organise a small shop on Hirta, situated within the MoD base. From this shop, visitors and Work Party members can buy a small range of souvenirs and postcards. The shop is opened for a short time most evenings from May to August and by arrangement for the benefit of visiting cruise ships and other visitors. It is manned by Work Party members or by the Warden when there are no Work Parties on site.

6.9 Visitor Numbers

Visitor numbers are compiled by the Warden for each month of the summer season. The figures for 1986 to 2002 are shown below. The figures for 1997 are the highest (1,958) recorded in this period and are around three hundred higher than the previous highest figure (1,693) two years before in 1995.



6.10 Visitor Pressures

Due to the difficulties in getting to St Kilda, visitor numbers are naturally limited and those visitors who reach the islands tend to treat them with respect. The Bylaws are in place to try to influence visitor behaviour on the islands and ensure that the natural and cultural heritage is protected from adverse visitor impacts.

Since 1995, the number of visitors to St Kilda each year has been between 1,500 and 2,000. However, of these the number who venture outside the Village Bay area is probably only about 100 per year.

The impacts from these visitors are minimal and thus not of immediate concern. Areas which may be sensitive at certain times of the year, such as the areas of Oiseval used by nesting peregrines, are often identified and visitors requested to stay away from them. Visits to the stacs and other islands are also limited by permit in order to minimise impacts to wildlife. Climbing the cliffs and sea stacs without authorisation is prohibited under the Bylaws to minimise disturbance to the nesting birds.

7. Education

The annual Work Party programme is the main mechanism the Trust has to provide public access to St Kilda and thus an *in situ* opportunity to learn about its cultural and natural heritage. Through the Work Parties, many people have been able to stay for a two week period on the island, experience its unique atmosphere and become familiar with its very special characteristics. The small museum on the island provides all visitors with a synopsis of the many features of the island, both natural and cultural. The Schoolroom has also been restored, reproducing its 1920s interior (based on a photograph taken by Atkinson in 1936). However, comparatively little information is available in the schoolroom to advise the visitor of its history and the history of education in general on St Kilda.

Those who do not have the opportunity to visit St Kilda may now have access via the world wide web. The St Kilda web site (www.kilda.org.uk) is already extremely popular and has great potential to be improved still further, as discussed in this Plan.

In a more formal educational sense, scientific research is carried out on the islands and the Trust and SNH can grant permission for expeditions of an educational nature to visit the archipelago. During the Trust's ownership of the islands, there have been some visits by school and university parties.

8. Interpretation

The first exhibition on Hirta on the history and culture of the islands was set up in the Schoolroom in 1978 by Mary Harman. The Schoolroom at that time was also being used as a Trust/St Kilda Club shop, run by the warden.

In 1980, the exhibition was dismantled by a Work Party renovating the Kirk and Schoolroom. In 1981 Trust Work Parties renovated House 3 on the Street in Village Bay, which was then fitted out as a small museum containing a larger exhibition than the one originally contained in the Schoolroom. This is the exhibition currently in the museum and it contains a series of panels around the walls covering the various topics of importance on St Kilda : geology; botany; mammals; birds; history; social organisation; the Village; other buildings; sea and land produce; textiles; dress; communications; and visitors to the islands. A set of display cases in the centre of the House contain sherds of pottery, textiles, agricultural implements, dress and personal items, and various other artefacts. Storage conditions for this type of display are obviously difficult on St Kilda, although the museum has de-humidifiers to try to prevent damage to the exhibits. The House also contains a visitors book and donation box. The Interpretation in the museum will be updated during the life of this Plan as part of an Interpretative Plan for the islands.

The Church and Schoolroom have been restored to depict the interiors as they might have been in the 1920s . The Schoolroom is furnished with a teacher's desk, pupils' seating, wall maps and shelves. There is some interpretive material to accompany this.

9. Archives

A large quantity of information on St Kilda exists within the Trust. This is contained within the general Trust Archives, the Trust library, the Trust's Highlands and Islands Region (with specific reference to its archaeology) and within the Bute Collection (a series of boxes containing books and literature on St Kilda, the core of which was donated to the Trust by the 5th Marquess of Bute). This information, which ranges from books and scientific and research reports, to general correspondence on the property since 1957, is scattered throughout the Trust and there is no overall inventory in place. Work has started on this and suggestions have recently been made

(2001) that a post should be created to ensure the creation of a comprehensive concordance of the contents of the various archives and research papers that exist across the country and further afield.

10. The St Kilda Club

Founded in 1958, the purpose of the St Kilda Club is to promote an interest in St Kilda and to foster friendship among those who have visited the islands. It also aims to raise funds for the preservation and maintenance of the structures on the islands, and to liaise with the Trust in the promotion and activities of the Trust in conserving St Kilda. Membership of the Club is open to all with an interest in St Kilda and paid membership currently stands at approximately 1000 (as at December 2002). Many of the members of the Club have participated in the Work Party Programme over the years and have therefore been actively involved in the conservation and restoration of the physical, architectural and, in many ways, spiritual attributes of the islands. Most of the restored buildings on Hirta, such as the Church/Schoolroom, the Store, the six re-roofed houses and numerous blackhouses, cleits and dykes all owe their restoration to Work Party members, who through their membership of the St Kilda Club retain a devoted and committed interest in the islands and all that goes on there.

A well attended reunion of members takes place in November every year in Edinburgh and a newsletter, 'The St Kilda Mail', is circulated to members annually. The St Kilda Club regularly donates considerable sums of money to the Trust, to help with its conservation work on the islands (£12,000 in 2002 and £7,000 in 2001). These donations have been gleaned mainly from the profits from the shop run by the Club and others on Hirta, and from the sale of books and souvenirs at the annual reunion. The money has been used for a wide variety of projects over the years relating to conservation on the Islands.

The St Kilda Club is, in effect, the “Friends of St Kilda” and as such they provide an invaluable source of enthusiasm and support and play an important role in promoting continuing interest in the islands across the world.

RISK ASSESSMENT

1. Introduction

1.1 The development of this Management Plan followed a sequence of:

- identification and description of key features
- assessment of the significance of key features
- identification of issues and risks affecting the significance of the site
- development of management objectives, prescriptions and actions.

These elements are discussed in the relevant parts of the Plan.

1.2 This section of the Management Plan therefore aims to highlight how the Plan has sought to respond to potential risks to the significance of the site.

2. St Kilda and Surrounding Waters Risk Assessment

2.1 In addition, as part of the process of developing the re-nomination submission for the St Kilda World Heritage Site, the Scottish Executive commissioned an assessment of the risks to the natural and cultural heritage of the islands from a range of activities in and around the archipelago. The assessment is being carried out by Posford Haskoning and their draft report, “St Kilda and Surrounding Waters Risk Assessment” (31 December 2002) offers additional insight into potential risks around the islands, the sensitivity of features to such risks (including recoverability) and mechanisms to mitigate their effects.

2.2 This independent assessment of potential risks to the nominated extended St Kilda World Heritage Site identified a number of potential threats from outside the site boundary. Careful consideration was given by the UK authorities to whether the identification of a World Heritage Site Buffer Zone would be an effective tool in managing such risks. The conclusion was that a Buffer Zone would not add to the protection afforded by other designations and existing regulatory regimes, reinforced by advocacy to mitigate the impact on the World Heritage Site of activities outside the boundary.

2.3 The physical cultural heritage features of the nominated site are restricted to the land and therefore in effect the marine part of the site constitutes a buffer zone for these features.

2.4 Through the appropriate existing measures of protection any risks to natural heritage features are minimised by the measures outlined in the Management Framework section of this Management Plan, and by the statutory protection offered by the area's designation as a National Nature Reserve, Special Protection Area and Special Area of Conservation.

2.5 The natural heritage, cultural heritage and landscape properties of the site are also afforded strong protection through the UK's statutory planning system that directs statutory policies in relation to Scotland's coasts. This is further complemented by the powers and duties vested in Scottish Natural Heritage, the Government's statutory advisor on nature conservation, landscape and access and the UK Government's commitment to carry out a Strategic Environmental Assessment in advance of any developments (soon to be enshrined in statute). The whole nominated site also lies completely within sites separately identified for protection under European Law (The Birds and Habitats Directives) for their natural heritage value, which affords protection

against any action, within and outwith the site, that may have an adverse effect on the site.

3. Responding to Risks in the Management Plan

3.1 The table below summarises the Management Plan's agreed responses to identified potential risks to the nominated extended World Heritage Site. These responses are either in the form of objectives and prescriptions/actions to address potential risks or in the form of clarifications of existing control mechanisms to mitigate their impact, noted in the Management Framework section of the Plan.

3.2 Risk Management is an ongoing issue, allowing both the Management Plan and on the ground management activity to respond to new information at any time.

Degradation or decay of structures and other historic features
Objectives 2 – 4 discuss the planned monitoring and maintenance regime to prevent such degradation.

Impact of development on the landscape
Objectives 9 and 10 note the arrangements in place to ensure that any future development need associated with either the management of the site or the operation of the MoD base have minimal impact on the archaeological, natural and landscape features of Hirta. The need to mitigate the impact of any proposed offshore development on the setting of the site and the intangible "St Kilda experience" has also been identified. The feeling of isolation and connection with the landscape, culture and natural heritage of the islands is a key part of the experience for visitors and the protection of such an intangible quality is a management challenge. Visual impact has been judged to be the key potential risk to this experience and the Strategic Environment Assessments carried out prior to licensing either for oil or gas works or for renewable energy development (see *Management Framework*) act as a control mechanism. The impact of unauthorised flying activity on the intangible experience is considered below. Objective 27 also notes that on-site interpretation will not detract from the "emotional experience" of visiting St Kilda.

Coastal Erosion
Objective 9 notes work already begun to identify and implement a long term solution for dealing with coastal erosion in Village Bay and the impact of the existing hard defences.

Threats to the genetic integrity of Soay and Blackface sheep
Objective 15 discusses mechanisms to prevent the introduction of disease and to prevent the dilution of the flocks' important genetic integrity.

Invasive animals/parasites and plant species
Objectives 18 and 19 discuss control problems to prevent or deal with the introduction of non-native species, which would have a negative impact on native animal species and on biodiversity. The introduction of rats is potentially the biggest long term threat to the seabird colony and mechanisms in the Plan to prevent this and to deal with introduction if it should occur, will be a priority for implementation.

Impact of shore-based activities on the marine environment
Objective 20 notes existing mechanisms in place to prevent and minimise the impact of shore-based activities on the marine environment and contingency plans to deal with accidental discharge of oil or waste products. Objective 22 plans for the development of a revised Oil Spill Response Plan to deal with oil spill from any source.

Unauthorised flying activity
Objective 21 notes the existing measures agreed with QinetiQ to ensure that Range activities have a minimum impact on the site. Plans to seek a reduction in the number of unauthorised flights, which bring disturbance to seabirds, risk of bird strike and reduction in "wild land" protection, are also discussed.

Risks to seabird resting and feeding areas

Objective 22 discusses potential risks to seabirds from a range of activities, in particular oil spill from passing vessels, and notes existing mechanisms and advocacy commitments to mitigate these risks.

It is expected that the final draft of the “St Kilda and Surrounding Waters Risk Assessment” will give further evaluation of the risk of encountering oil on the surface of the sea within feeding and resting areas for seabirds from St Kilda.

The Plan also notes broad objectives relating to potentially damaging fishing methods. Any detailed fishing controls would be agreed as part of the development of the detailed management scheme for the proposed marine SAC and would be subject to full public consultation. The Management Committee established to implement the SAC management scheme would include the relevant competent authorities as defined in the Habitats Regulations, thereby opening up discussions with key authorities to consider marine issues such as shipping and fishing. The latter will necessarily include consideration of the social and economic impact of any fishing controls.

To inform these discussions, it is expected that the final draft of the “St Kilda and Surrounding Waters Risk Assessment” will give further evaluation of the risk posed by fishing activities to fish stocks, both in terms of depletion of stock levels and competition with seabirds for food.

Impact of visitor access

Objective 23 discusses the potential impact of divers on the marine environment and Objective 26 notes potential risks from other types of visitors. Planned measures to mitigate these risks are also noted.

In particular, the issue of climbing will be subject to a thorough risk assessment as part of the implementation of the Plan. This will seek to consider the requirements of the Land Reform Act 2003 in respect of access to the countryside alongside the requirements of the existing conservation designations.

Impact of MoD departure from St Kilda

Objective 36 notes plans to prepare a contingency plan for the management of the site in the event of the MoD withdrawing from the archipelago. The contribution of the base and of QinetiQ staff to the conservation management of the islands is considerable and it is vital that such a contingency plan sets out the means of providing comparable services in their absence.

PART SIX

ST KILDA MANAGEMENT PLAN

LIST OF FIGURES AND APPENDICES

The following figures are included in the full St Kilda Management Plan, but are not currently available on-line.

Figures

Appendices