

Managing Vulnerabilities of Small Island Heritage



Ilan Kelman

<http://www.islandvulnerability.org>
islandvulnerability@yahoo.com

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Executive Summary

This project investigated how small islands and their communities could achieve sustainability through managing vulnerabilities to their heritage. Three case studies were selected: Brownsea Island in southern England, the Faroe Islands in the North Sea, and Rathlin Island in Northern Ireland.

The field work yielded a three-level framework of (1) the fundamental ethos which should be adopted, (2) guiding principles for delineating an overall strategy needed to effect the ethos, and (3) operational manuals for carrying out the work. Limitations of the field work and this framework were also explored.

The fundamental ethos adopted is that managing vulnerabilities to heritage can and should be used to achieve sustainable communities. Small islands are particularly important for such work and they deserve much more prominence and resources than they traditionally receive.

Four guiding principles were proposed.

Guiding Principle 1: Taking or creating risk can be appropriate.

To achieve sustainability through managing vulnerabilities to small island heritage, investment might be needed initially. On Rathlin, the National Trust's choice to invest or not to invest could be the main determining factor in whether or not Rathlin becomes sustainable. Nonetheless, if investment is made, a small chance still exists that Rathlin livelihoods would not be sustained, even with the National Trust's expertise and clout. The investment might not yield the desired results, but the potential gain is so immense and the lessons learned would be so valuable irrespective of the outcome, that taking the risk would be worthwhile.

Guiding Principle 2: Heritage can build and sustain communities.

The National Trust can and should build and sustain communities. The National Trust implements this principle in many locations. Due to their importance and marginalisation, small islands should be a National Trust priority for such activities.

Guiding Principle 3: Be clear and honest about needs and capabilities.

Heritage sites and the National Trust cannot be everything to everyone. Such limitations should be clearly and openly acknowledged. For example, income from tourists is needed on the Faroes, but heritage sites might appeal to a limited clientele due to weather, remoteness, and required physical fitness. Nonetheless, marketing should be honest to attract the type of visitor who would enjoy and contribute to the Faroes. Knowing limitations and admitting them openly would help to develop viable plans and to suggest the other inputs which would be essential for success.

Guiding Principle 4: An all-vulnerability approach should be considered.

Specific vulnerabilities should be viewed in the wider, comprehensive context. All time and space scales, environmental and non-environmental vulnerabilities, and event-based and ongoing vulnerabilities should be considered along with possible combinations. An all-vulnerability approach is needed to avoid saving one heritage site at the cost of harming or losing the community.

All guiding principles should be operationalised to work in practice. Operational manuals are needed to describe what to do and how to do it. A general operational manual for managing vulnerabilities of small island heritage would be useful, but operational manuals could also be task-orientated or location-specific.

Based on the three-level framework, three recommendations were developed.

Recommendation 1: Support small island networks and networking.

Two island networks should be created: Islands of the National Trust (ISLANT) and Small Island Vulnerability Reduction (SILVR).

ISLANT would be a forum for stakeholders of the National Trust's small island properties. Education and exchange would be the primary activities.

SILVR would undertake proactive projects to reduce heritage vulnerability on small islands. Examples are restoring and managing heritage sites, training workshops, and

advocacy. Expanding beyond the National Trust would be needed for success, but the National Trust would be an excellent focal point and could become a leader in this area.

Recommendation 2: Create funds and fundraising drives for small islands.

The Neptune Coastline Campaign is being reviewed and relaunched. An opportune moment exists either to consider a separate fund for small islands or to earmark a set proportion of Neptune funds, perhaps 15%, for small island acquisitions and management.

Recommendation 3: Implement small island projects.

The Year of the Sea 2005 presents an opportunity to support projects specific to the small island theme. A starting point would be to found ISLANT and SILVR, followed by implementing the projects mentioned for these networks. The National Trust would gain substantially through becoming an island focal point, forging international linkages, generating positive publicity, and exchanging knowledge and skills.

Along with enacting these recommendations, more work is needed to reduce uncertainties and to confirm the pathway for success. Further theoretical work would help to better understand the concepts presented and the actions proposed plus their place in wider contexts. More practical work, such as through further exploration of the three case studies examined here, would help to focus solutions. Other appropriate case studies include Lundy Island in western England, the Finnish autonomous islands of Åland, and the British Overseas Territories including the Falklands.

This work has indicated that managing vulnerabilities of small island heritage can assist in building and sustaining small island communities. Active approaches for, and strong investment in, implementing this strategy for specific sites should be continued and expanded.

In island vulnerability lies island intrigue, but also allure, inspiration, beauty, hope, development, and sustainability. The opportunity exists now to lead the process of preserving, using, and promoting heritage on small islands for reducing vulnerability and for sustaining communities. That opportunity should be grasped.

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- James Lewis and his book Development in Disaster-prone Places: Studies of Vulnerability (Intermediate Technology Publications, London, 1999) for continuing to provide island inspiration.
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Any errors or misapprehensions in this report are entirely my fault.

Abbreviations

All measurements use standard metric abbreviations.

All currencies are converted into UK Pounds Sterling as of October 2003.

EEAEuropean Economic Area (as of October 2003 is assumed)
http://europa.eu.int/comm/external_relations/eea

EU.....European Union (as of 2003 assumed is assumed) <http://europa.eu.int>

ISLANTIslands of the National Trust

NT.....The National Trust (UK) <http://www.nationaltrust.org.uk>

SILVR.....Small Island Vulnerability Reduction

UKUnited Kingdom of Great Britain and Northern Ireland <http://www.gov.uk>

UNUnited Nations <http://www.un.org>

UNESCO ..United Nations Educational, Scientific and Cultural Organization
<http://www.unesco.org>

1. Introduction

In island vulnerability lies island intrigue.

1.1 Islands, Heritage, Vulnerability, and Sustainability

Islands have long fascinated researchers, voyagers, and writers. Lewis (2003) exemplifies the wealth of material produced about islandness and the meaning of being an islander. The literature on specific islands, research methods suited to islands, and how island research informs the wider world is as vast. See, for example, *Island Vulnerability* <http://www.islandvulnerability.org>, particularly the resources section. Witness too the theories which have emerged from islands, including island biogeography (e.g. MacArthur and Wilson, 1967 which was reprinted in 2001), island social networks (Hage and Harary, 1996), and island epidemics (Cliff *et al.*, 2000).

These three examples relate to island heritage. Biogeography includes natural heritage, social networks contribute to cultural and historical heritage, and epidemics can ruin any heritage. The core of this research is formed by these themes: islands, heritage, and the island heritage's vulnerabilities. The overarching issue, within which discussion of these themes takes place, is island sustainability.

These themes were explored with an open mind as a "blue sky" research project. Except for the fundamental goal of sustainability, preconceived notions regarding the interaction of islands, heritage, and vulnerability were avoided. The approach was to visit case study sites, to examine the themes, and to learn any results, lessons, successes, or failures which emerge. The patterns and ideas which resulted from this intellectual and physical wandering are reported here.

1.2 Overview

Exploring and integrating the topics mentioned in Section 1.1 led to investigations on how small islands and their communities could be sustained through managing vulnerabilities to their heritage.

Considering the kind support received from NT which made this work feasible, an important attribute of this report is relevance to and usability for NT. Research which is original is important too, so that NT could not find the results elsewhere. Additionally, the research should have practical outcomes and should be applied to real cases. These traits of practicality, originality, usability, and relevance to NT were prominent during this work.

With the starting point and project characteristics established, the following sections describe the research and results. Section 2 details the definitions used and context in which those definitions are placed. Section 3 uses this context to select specific case studies. These case studies are examined in section 4 while results are explained in section 5 as outcomes from this work. Section 6 discusses limitations and boundaries of the work. Recommendations and conclusions are summarised in Section 7.

2. Definitions and Context

2.1 Introduction

The island, heritage, vulnerability, and sustainability themes need to be more clearly defined and placed in context to establish a common vocabulary and starting point for the research. Intuitive and working descriptions of the terms are adopted, rather than entering the legal and academic minefield of seeking exact, perfect, or uncontroversial definitions. At times, discussion elsewhere in this report might appear to deviate from the material provided in this section. Such instances manifest from the challenges of defining terms rather than from inconsistencies in the ideas explored.

2.2 Small Islands

For this work, the island theme is further narrowed to “small island”. The definitions of “island” and “small island” are examined by NT elsewhere (Kelman, 2003), so details are not provided here. Instead, based on that discussion, a small island is defined as a relatively small land mass surrounded by water which does not have land-based transportation links to a larger land mass.

2.3 Heritage

Heritage has already been alluded to as natural, cultural, or historical aspects of an environment or society. These aspects could be objects, sites, buildings, ideas, artwork, food, words, or language. Although the implication is that heritage is passed from one generation to another, the idea of ownership or something created by society does not necessarily apply to natural heritage.

2.4 Vulnerability

Vulnerability indicates the potential for damage or harm to occur. In the context of this report, small island heritage is continually vulnerable to significant environmental and non-environmental risks which can threaten the heritage’s sustainability.

Environmental risk refers to potential damage from natural hazards such as rapid temperature fluctuations, waves, coastal erosion, and sleet along with more extreme events such as storm surges, landslides, and earthquakes. Some environmentally-linked risks have significant human-induced aspects, such as climate change being influenced by greenhouse gas emissions and flooding being influenced by community design. Non-environmental risk refers to potential damage from human-induced hazards such oil spills, vandalism, and the loss of interest or ability in sustainably caring for heritage. Some non-environmental risks could have environmental input, such as an oil tanker breaking up in a storm.

2.5 Sustainability

Murcott (1997) lists 57 definitions of “sustainable development” which appeared in the literature between 1979 and 1997. Even though many convey similar ideas, reconciling them is not simple. Rather than creating ambiguity through the odd phrase and multiple meanings of “sustainable development”, the more elegant and focused term “sustainability” is adopted, based on the dictionary definition (OED, 2003): the capability to be upheld or maintained indefinitely. In this context, the capability is human survivability on Earth and, hence, on small islands.

2.6 Integrating the Themes

In many instances, the viability and desirability of sustainability for heritage management are questionable. Possible solutions for reducing the heritage’s vulnerability should be explored along with reasons for implementing and reasons for not implementing each solution. In some cases, the vulnerability is an integral part of the heritage (see Table 2.6.1). Sustainability could therefore imply deliberately maintaining certain heritage while knowing and accepting detrimental consequences for other heritage.

Table 2.6.1: Examples of Vulnerability Being an Integral Part of Heritage
 (Using the main case studies from this report. Lewis (1999) and <http://www.islandvulnerability.org>, amongst others, provide other examples.)

	Action	Heritage Protected	Heritage Threatened
Brownsea Island	Promoting scout camping visits.	The island’s connection with the Scout Movement.	Natural heritage through too many overnight visitors.
Faroe Islands	Running frequent boat trips for tourists to scenic bird cliffs.	Faroese language by creating jobs and income, thereby discouraging emigration.	Scenic cliffs and seabirds when boats damage cliffs or frighten birds.
Rathlin Island	Banning egg and bird collection from cliffs.	Natural heritage of scenic cliffs and breeding seabirds.	Cliff-collection skills and the creation of a sustainable community by using local natural resources.

Small islands provide the compactness and isolation needed to fully analyse and communicate such inter-relationships amongst vulnerability, heritage, and sustainability. They often display important heritage, experience significant vulnerabilities, and face considerable sustainability challenges (Table 2.6.2).

Table 2.6.2: Examples of the Importance of Small Islands
(Using the main case studies from this report. Lewis (1999) and <http://www.islandvulnerability.org>, amongst others, provide other examples.)

	Important Heritage	Significant Vulnerabilities	Sustainability Challenges
Brownsea Island	Red squirrels, one of the UK's most endangered native species. Brownsea's islandness has helped to protect red squirrels from grey squirrels introduced to the UK.	Potential conflicts between Poole Harbour users (e.g. watercraft operators) and attempts to stop coastal erosion.	Maintaining an adequate water supply. A pipeline to the mainland was constructed in 2003 to assist in resolving this issue.
Faroe Islands	Faroese language and literature.	Infectious Salmon Anaemia destroying the fish farm industry.	Maintaining a viable economy without Denmark, which provides an annual subsidy of about £55 million, approximately 15% of the Faroes' annual budget.
Rathlin Island	Robert the Bruce's cave, where a spider encouraged him to continue battling the English in the 14th century (according to the legend).	Population decline decreasing the possibilities for a long-term community.	Self-sustaining transport to and from the island. The Caledonian MacBrayne ferry is subsidised by approximately £300,000 per year by the UK government.

Despite their importance, small islands tend to be prioritised disproportionately low due to their physical and psychological isolation. Reasons for neglecting small islands include small size, lack of resources, and relative inaccessibility, yet these same characteristics often make small islands and their heritage more unique and more vulnerable. When vulnerability threatens to create risks, small island insularity might preclude a timely response with the needed resources. The result could be worse consequences than would

occur at another location experiencing similar vulnerabilities. Thus, islandness exacerbates the challenges faced in managing vulnerabilities of heritage and achieving sustainability.

3. Case Study Selection

3.1 Selecting Case Studies

NT works to preserve and protect the coastline, countryside, and buildings of England, Wales and Northern Ireland (NT, 2003). Therefore, case studies from those locations were important to ensure direct relevance to NT (section 1.2). As the name of the Arkell European Fellowship implies, one reason for establishing the programme was to tap into European experiences beyond the UK. Thus, a location outside the UK but within Europe was also desired.

Fourteen coastal EEA states include small islands, with Belgium as the lonely exception. Examples are Iceland's Vestmannaeyjar, Ireland's Cape Clear, Spain's Tenerife, and Greece's Naxos. EEA countries also administer small islands which are not formally part of the state's sovereign territory, including the UK (e.g. Pitcairn Island and Guernsey), France (e.g. Mayotte and New Caledonia), and the Netherlands (e.g. Aruba and Saba). The importance of European small islands is recognised through networks—such as the European Small Islands Network, Eurisles, and Islenet—and in the funding which the EU allocates specifically to regional and marginalised areas, many of which are islands. Objective 1 of the Structural Funds is “Supporting development in the less prosperous regions” which are mainly islands, particularly “the outermost regions (French Overseas Departments, Canary Islands, Azores and Madeira)” (see Wulf-Mathies, 1999 and http://europa.eu.int/comm/regional_policy/index_en.htm).

NT has recognised the importance of small island heritage through acquiring small islands and small island properties. Some examples in England:

- The Farne Islands were acquired by NT in 1925.

- The Newtown estuary on the Isle of Wight is owned by NT.
- The Landmark Trust and NT jointly own Lundy Island which is “England's only statutory Marine Nature Reserve” (NT, 2003) and which displays important cultural heritage from the Neolithic and Bronze ages up until the nineteenth century.

Additionally, small island, coastal zone, and ocean heritage are intertwined. NT's Neptune Coastline Campaign <http://www.nationaltrust.org.uk/coastline> spends approximately £3 million each year purchasing coastal land, including islands. In 2003, NT owned 530 km² of coastal hinterland, covering over 900 km—nearly 20%—of the coastline along England, Wales, and Northern Ireland. These properties require significant resources to manage and are a major responsibility for NT (e.g. Pye-Smith and Cornish 1990). NT is also involved in the UK's Year of the Sea celebrations in 2005 to commemorate the bicentenary of the Battle of Trafalgar on 21 October 1805. As preparations for the Year of the Sea commence, including an evaluation of the Neptune Coastline Campaign to prepare for its relaunch in 2005, this report's small island endeavours are timely for informing all of NT's coastline and sea activities.

Selecting small islands for this project is thus relevant to NT, the UK, and Europe. As well, this focus represents an original contribution and produces practical and usable outcomes.

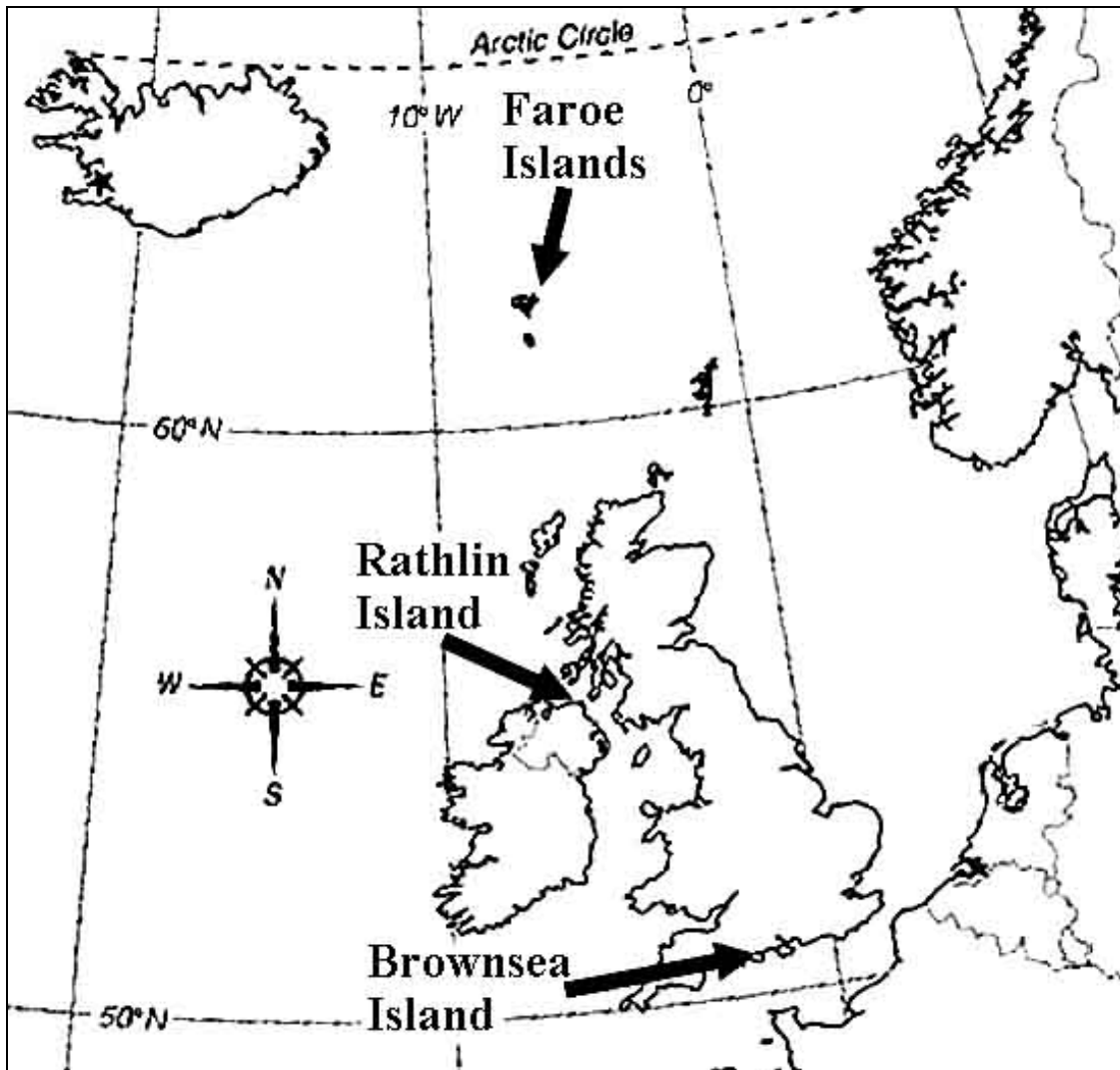
Discussions with NT yielded the following case study choices (Figure 3.1.1):

- Brownsea Island, in Poole Harbour in the county of Dorset in southern England.
- Faroe Islands, in the North Sea.
- Rathlin Island, near the north coast of Northern Ireland.

These islands have prominent heritage, are subject to a variety of event-based and ongoing environmental and non-environmental vulnerabilities, and must deal with significant sustainability challenges (e.g. see Tables 2.6.1 and 2.6.2). Thus, they display immediate relevance to NT, which is further amplified by NT's ownership of Brownsea and parts of

Rathlin. The comparative dearth of previous studies on the Faroes and Rathlin further adds to the originality of this work. Therefore, examining these islands would yield the originality, practicality, and usability sought for this project. Further information about these case studies is in section 4.

Figure 3.1.1: Location within Europe of the Case Study Sites
(Modified from map at http://www.eduplace.com/ss/maps/pdf/eur_countrynl.pdf)



3.2 Field Work

In addition to literature and web searches on the case study sites, field visits were undertaken to Rathlin Island in June 2003, to the Faroe Islands in July 2003, and to Brownsea

Island in August 2003. Except where necessary and where permission has been obtained, individuals are not named in this report to encourage uninhibited discussion.

4. Case Study Results

4.1 Introduction

This section describes the observations and findings made regarding the case studies. The information is presented through a matrix of heritage and vulnerability examples for each island. An indication is also given of the level at which to tackle each issue based on the categories in Table 4.1.1.

Table 4.1.1: Levels at Which Heritage-Vulnerability Examples Should be Tackled

Geographical	Example	Sectoral	Example
local	island, town, county	community	NGOs, special interest groups, residents, visitors
national	England, the Faroes, Northern Ireland, the UK, or Denmark	government	local authorities, national ministries
regional	EU, EEA	private sector	private firms, commercial enterprises
global	intergovernmental organisations (e.g. UN), multilateral negotiations		

The matrices for the islands are illustrative rather than comprehensive, but key and prominent examples have been deliberately selected. For each case study, two examples are highlighted in grey and are analysed in detail.

Many of the issues mentioned in the matrices relate to climate change and global environmental change which must be tackled at all levels and by all sectors, particularly since it appears to have both environmental (natural) and non-environmental (human-caused) influences (e.g. IPCC, 2001; Mann *et al.*, 2003; Stott, 2003). Climate change is therefore not mentioned explicitly in each island’s matrix. As well, perhaps some vulnerability issues identified should not be tackled. For example, natural cliff erosion is identified as an ongoing environmental vulnerability for natural heritage in the Faroes and on Rathlin, but the most

sustainable option would tend to be to permit the erosion to occur. This strategy is adopted by NT for the Seven Sisters which are white cliffs along the East Sussex coast in southern England.

The matrices are a map to help solve identified problems and, as important, to help communicate the problems, options, and solutions. As with NT's Statements of Significance (NT, 2000), they provide a starting point for a deeper understanding of the issues. Therefore, the importance of this section and the matrices is both for the information contained and for the tools used to present that information.

4.2 Brownsea Island, England

Brownsea Island (Figures 4.2.1 and 4.2.2) is the largest island in Poole Harbour, being approximately 2.3 km by 1.0 km yielding an area of just over 2 km². 29 people live there year-round, augmented by summer seasonal staff of about two dozen. NT acquired the island in 1962, but the 0.9 km² Nature Reserve which includes The Lagoon has been leased to the Dorset Wildlife Trust while the castle and grounds have been leased to the John Lewis Trust.

Before NT ownership, private owners treated the island differently, ranging from attempts at creating a luxury pottery industry to evicting all residents and letting nature take over. Brownsea historical events include Henry VIII's decision to build coastal defences on the island and the first experimental scout camp in 1907 which led to the founding of the Scout Movement. Nature attractions include red squirrels, a peacock population, and—especially in The Lagoon—breeding grounds for wildfowl and waders. Ferry is the only public transport available for reaching the island. Further sources of information about Brownsea Island are listed in Appendix A.

Brownsea Island was selected as a case study to examine the wide range of threats facing the location, to take advantage of the work already carried out there, and to provide

results directly pertinent to NT's efforts to manage the site. Table 4.2.1 provides examples of Brownsea's heritage and vulnerabilities.

Figure 4.2.1: Brownsea Island's Location
(Modified from map at <http://www.multimap.com>)

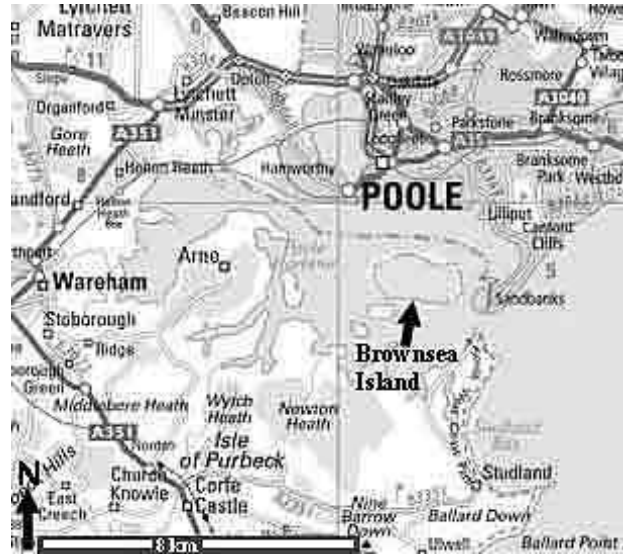


Figure 4.2.2: Brownsea Island Map
(Modified from map at <http://www.nationaltrust.org.uk/places/brownsea>)

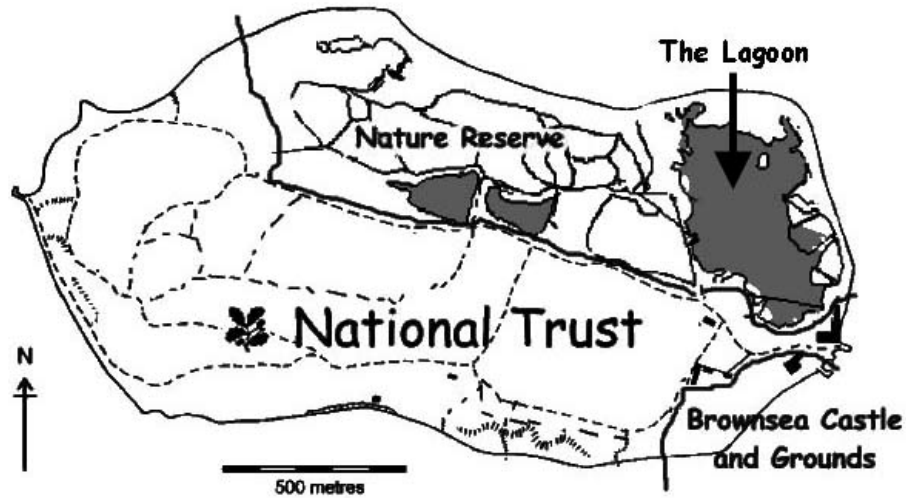


Table 4.2.1: Brownsea Island’s Heritage and Vulnerabilities
 (Words in bold in each cell indicate the levels at which to tackle each example, based on the categories in Table 4.1.1. The examples highlighted in grey are discussed further in this section.)

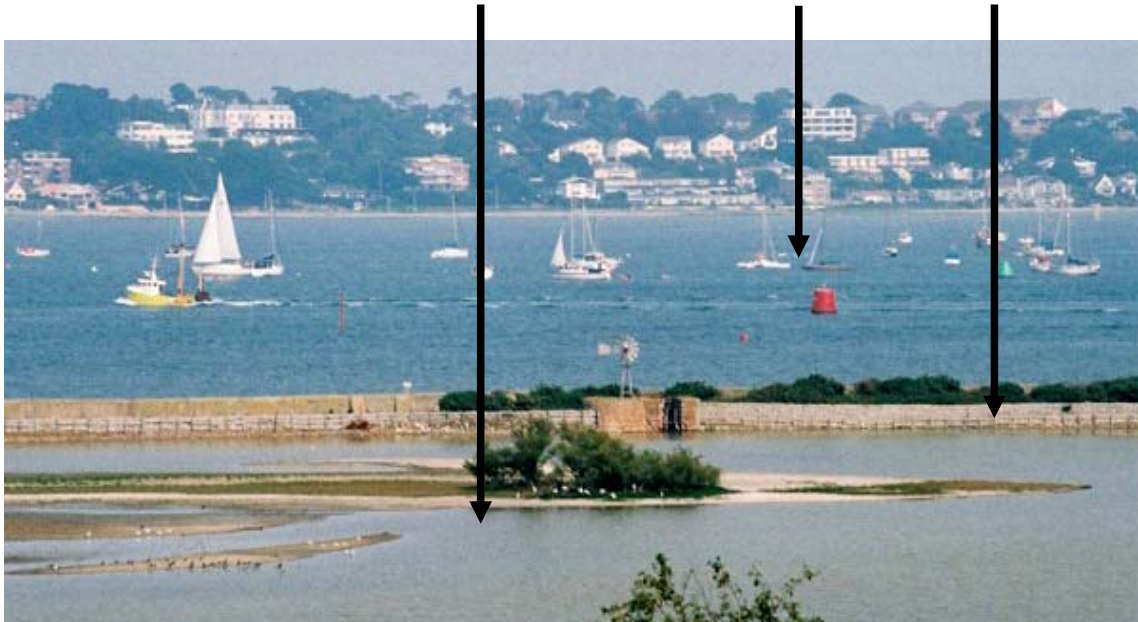
	Event-based Vulnerabilities		Ongoing Vulnerabilities	
	Environmental	Non-environmental	Environmental	Non-environmental
Historical, Social, Cultural, or Built Heritage	Wind damaging the cottages or castle. •local •community	A fire damaging the scout trading post. •local •community	Sea-level rise threatening coastal retreat towards the cottages and castle grounds. •local •community	Visitors taking pieces of pottery. •local •community
Natural Heritage	A storm breaching the sea wall and flooding the lagoon. •local •community / government	An oil spill, e.g. a pleasure boat’s fuel tank rupturing, contaminating shoreline. •local •community / government / private sector	Deer and rabbits damaging vegetation. •local •community	Wakes and waves from boats exacerbating or causing coastal erosion. •local •community / government / private sector

The two issues highlighted in Table 4.2.1 are similar in that coastal heritage is threatened by the encroaching sea, whether by an extreme event or by ongoing environmental changes. A concern is that protecting the heritage and reducing the vulnerability might be contradictory management options. If sea level is rising substantially, or to be assured of protecting against the most extreme storms, the only available long-term protection option for the cottages (Figure 4.2.3), castle grounds, and lagoon (Figure 4.2.4) might be large structural defences. The unsightly view and environmental impact of such constructs (Figures 4.2.5 and 4.2.6) could have as many detrimental consequences for Brownsea Island as the loss of the heritage to the sea. Furthermore, the cost of maintaining structural defences for decades or centuries is relatively high and would likely drain resources away from preservation and promotion of other heritage sites, including those on Brownsea.

Figure 4.2.3: Brownsea's Cottages at the Shoreline



Figure 4.2.4: Brownsea's Lagoon Separated from Poole Harbour by a Sea Wall



Figures 4.2.5 and 4.2.6:
Ineffective, Ad Hoc, and Damaging Structural Sea Defences on Brownsea



One technical solution to consider would be “managed relocation”, i.e. moving the buildings to, and creating a lagoon on, other sites not as threatened by the sea. McGlashan (2003) describes how this option was implemented in four sites for buildings, including one in southern England.

Relocation does not necessarily yield sustainability or long-term vulnerability reduction. On Brownsea, most coastal locations are equally vulnerable to specific events such as storms and ongoing issues such as sea-level rise. Moreover, heritage is not always simply

the presence of a building or natural feature, but could include the location too. Particularly for buildings, location is part of the structure's history and partly represents the cultural, social, and technical reasons for having been built there. Altering the location of a heritage building might divorce the physical structure from its heritage meaning, thereby effectively destroying the heritage sought to preserve.

The cottages, in particular, are people's homes. Some residents have been there for decades. For many people, the physical difficulties of moving one's house pale beside the psychological difficulties of moving one's home.

At times, therefore, no solution prevents heritage loss. When the loss arises from an environmental process, particularly one which cannot be successfully opposed in the long-term, then we should seek to record and remember the meaning, history, and attributes of the heritage. In recognising that fighting nature might produce more problems than it resolves, we lose both house and home but we avoid the potentially unhealthy decline which would occur in falsely believing that we can artificially preserve both. However much we might wish that the loss would not occur, we might need to accept it, a stance strongly supported by NT policy and practice in coastal regions (e.g. Carter, c. 2002; Nixon, 2000; NT, 1995).

Small islands illustrate this challenge to the extreme. Whereas ten metres of coastal erosion in Dunwich or Scarborough in England produces dramatic images and forces people to move, ten metres of coastal erosion around Brownsea reduces the land area by more than 1%. Erosion and sea-level rise threaten not only specific heritage sites on Brownsea, but the island's existence—although complete loss in the near future is unlikely. The most appropriate option might be to accept this loss, despite the emotional and heritage costs.

This vulnerability of Brownsea's existence scales up the problem of the vulnerability of the existence of specific heritage sites, such as the lagoon, the cottages, and the castle. The principles and options are similar except that managed relocation is not a viable option for an entire island. Nonetheless, while Brownsea exists—likely and hopefully for a long time—it

can be explored, enjoyed, understood, and recorded. Irrespective of the island's ultimate fate, knowing its vulnerabilities and fragilities, and making them explicit, enhance the interest in Brownsea and its special place amongst NT properties, UK heritage sites, and small islands.

4.3 Faroe Islands

The Faroe Islands (Figure 4.3.1) are a self-governing overseas administrative division of Denmark with a strong impetus towards independence. Although Denmark is part of the EU, the Faroes are not. Approximately 46,000 people and 80,000 sheep share an area of 1,399 km² over 18 main islands along with several smaller islets. Seventeen of the islands were inhabited in 2003, but Koltur and Stóra Dímun had only one family each. The main settlements are the capital Tórshavn, population 12,000, and Klaksvík, population 5,000. The only international airport in the Faroes, on Vágur, was linked to the Tórshavn road by an underwater tunnel which opened in December 2002. When an underwater tunnel linking Klaksvík with the road to Tórshavn is completed in a few years—its opening is planned for 2006—six of the islands will be linked by tunnels, bridges, or causeways. Otherwise, the inhabited islands can be reached by boat or helicopter. Swimming between islands is inadvisable.

The main settlement period of the Faroes occurred about 1,100 years ago when Norwegian Vikings took over from Celtic settlers, mostly Irish monks, who had arrived approximately three centuries earlier. The population's first language is Faroese, a Scandinavian language with strong resemblance to Old Norse, but children learn Danish and English in school. Emigration, particularly to Denmark, has drained the population and skill base, an ongoing phenomenon which peaked during an economic crisis from 1992 to 1996 (some commentators state that the economic crisis years were 1989 to 1994).

Faroese society is undergoing further economic changes, principally due to the continuing decline of agriculture and fishing combined with the search for oil in the North Sea

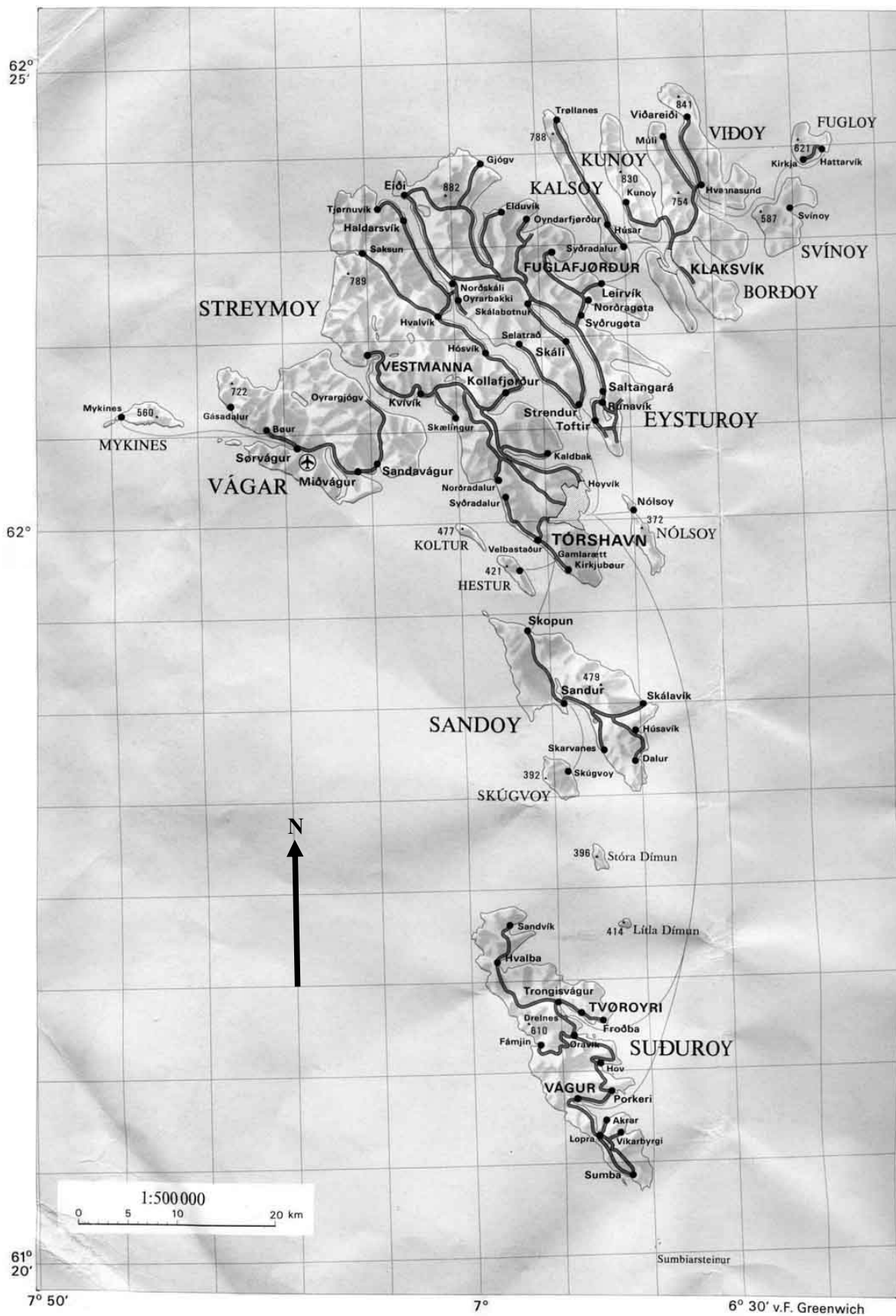
and efforts to substantially increase tourism. The expectation of this shift has resulted in intense debate, mainly related to how to stop oil revenue causing more societal problems than it solves. Nonetheless, Faroese are proud of their rich heritage and strongly seek to preserve it. Further sources of information about the Faroes are listed in Appendix A.

The Faroe Islands were selected as a case study site because they have significant heritage exposed to numerous, and potentially catastrophic, vulnerabilities. As well, their isolation makes them of particular interest for island studies and they are relatively poorly studied. Table 4.3.1 provides examples of the Faroes’ heritage and vulnerabilities.

Table 4.3.1: Faroe Islands’ Heritage and Vulnerabilities
 (Words in bold in each cell indicate the levels at which to tackle each example, based on the categories in Table 4.1.1. The examples highlighted in grey are discussed further in this section.)

	Event-based Vulnerabilities		Ongoing Vulnerabilities	
	Environmental	Non-environmental	Environmental	Non-Environmental
Historical, Social, Cultural, or Built Heritage	A landslide impacting buildings and archaeological sites. •local / national •community / government	Flooding archaeological sites for hydroelectric power, e.g. at Eiði. •local / national •community / government	The damp climate augmenting the challenges of restoring St Magnus Cathedral in Kirkjubøur. •local / national •community / government	Appropriate development for and preservation of the island of Koltur. •local / national / regional / global •community / government / private sector
Natural Heritage	A wind storm felling trees. •local / national •community / government	An oil spill affecting coastline, e.g. Runavík in July 2003. •local / national •community / government / private sector	Wave- and surface-water induced cliff erosion. •local •community / government	Too many tour operators taking people to the Vestmanna cliffs which might frighten away birds. •local / national •community / government / private sector

Figure 4.3.1: Faroe Islands Map
 (from Kort & Matrikelstyrelsen, 2001)



The island of Koltur amply illustrates some of the heritage, vulnerability, and sustainability challenges faced by the Faroes. Koltur, the smallest of the inhabited islands, has an area of 2.5 km² yet still rises 477 m above sea level. No commercial ferries travel to the island, but a public helicopter route has two scheduled landings on each Sunday, Wednesday, and Friday, weather-permitting. Otherwise, a boat or helicopter must be chartered privately or owned to reach Koltur. The inhabitants are a couple who farm the island, who were selected from a group of applicants to live there, and who are guardians of the unique Faroese heritage on the island.

Koltur has some of the best examples of the old Norse building tradition, in terms of community layout, building design, and architecture (Figure 4.3.2). Two clusters of buildings remain, one a few minutes walk south from the inhabitants' house and the harbour and one a few minutes walk north. The old buildings have not been well-maintained, but they are well-preserved. Over the past decade, the School of Architecture at the Academy of Fine Arts in Copenhagen, in cooperation with the Faroese National Museum and the Danish National Museum, has conducted extensive research and produced detailed architectural drawings of the buildings.

Figure 4.3.2: The Old Buildings of Koltur



A superb opportunity exists to turn Koltur into an exceptional heritage site of the traditional Faroese and Nordic building and community styles. More importantly and

creatively, one idea is making Koltur a living site where the buildings would be preserved and maintained yet made into a functional farm. They would illustrate how farming has been conducted in the Faroes over the past millennium.

This vision is spearheaded by Gunnar Hoydal, an architect who in the 1960's led the successful campaign to preserve Tórshavn's old district, Tinganes, against developers who wished to modernise all parts of the city. The old district of the Faroese capital is now recognised as a treasured heritage site due to the design of the houses, which are still occupied, and the narrow, pedestrian streets. In contrast, other Scandinavian cities lost such heritage to the pressures of development and modernisation. Tinganes is also the site of the Faroese Prime Minister's Office and some ministries.

The challenge for Koltur is balancing preservation with tourism. Visitor numbers should not exceed the ability to provide power, water, and appropriate waste management without damaging the island. Nonetheless, visitors would bring in revenue which would be needed to run and maintain the heritage site.

One principal issue is accommodation and facilities for visitors. Bringing the old buildings up to the modern safety and access standards needed for habitation could damage the buildings, either physically or through altering their character. Therefore, camping appears to be most appropriate alternative with the addition of adequate showers and toilets. Similarly, regular transport to and from Koltur would be needed, yet would impact the island's isolation. Visitors could perhaps work on the farm and contribute to the restoration and maintenance work in a similar manner to Earthwatch <http://www.earthwatch.org> projects. With groups arriving and departing irregularly, chartering a boat or helicopter becomes viable with minimal impact on Koltur's remoteness.

This brief description of some of the tradeoffs being examined to make Koltur a viable visitor centre or, potentially, UNESCO World Heritage Site (see <http://whc.unesco.org/nwhc/pages/doc/mainf3.htm>) illustrates the challenges faced by isolated

small islands in managing their heritage's vulnerability, yet indicates that solutions exist. The discussion also segues into the wider issue that surrounds Koltur, and much of the Faroes, of creating a visitable heritage site which receives adequate revenue without sacrificing the heritage, including the character of its surroundings.

Much contemporary, revenue-generating tourism in Europe and North America tends to be from package holidays with climate-controlled coach tours, restaurant meals, and ensuite accommodation. The Faroes can offer some of that, but to deeply understand the country, and especially Koltur, a clientele with different expectations would be needed. For example, the hour-long boat trip to Koltur can be across waves continually pitching the boat up to 30°—on a calm day. On windy or unsettled days, the five-to-ten-minute helicopter hop can feel as rough.

The marketing of Koltur, and in many ways the rest of Faroese heritage, requires a delicate balance of encouraging people to sample from and contribute to the uniqueness, beauty, and inspiration while being certain that visitors know what to expect. Earthwatch states on their website “We are not in the package holiday business, so if that’s what you want, best look elsewhere...if you want cable TV, piña coladas by the pool, and a quick drive past the sights, this is not for you”. For many, that statement is an impetus to become involved. The Faroes could similarly tap into tourists who recognise the joy of sleeping in tents in bleak, windswept, soaking, remote islands and the privilege of contributing to and living amongst a fascinating heritage site which brings history to life.

If such an approach succeeds, the cliffs of Vestmanna depict problems which could result, the vulnerabilities which must be managed, and possible solutions. For years promoted as an essential bird-watching visit for Faroes’ tourists, the Vestmanna cliffs are reached by a boat tour. In 2003, two main companies were operating two boats each. The tour lasts approximately two hours usually permitting four trips a day per boat for a total of sixteen trips every day. The boats travel within metres of birds in the water and on the cliffs, are powered

by motors, and tend to run all summer (Figure 4.3.3). Concern has been expressed that such continued activity disrupts the birds' breeding and feeding, scares the young, and imprints on the birds so that they will nest elsewhere in subsequent years.

Figure 4.3.3: Tour Boat at the Vestmanna Cliffs



Interviews with several Faroese, including some who know the Vestmanna cliffs well, produced a diversity of opinions including:

- The numbers of Vestmanna birds are declining, are staying the same, or are increasing.
- Puffins are more affected than guillemots and guillemots are more affected than puffins.
- Bird numbers on the cliffs could be affected as much by the presence of the fishing industry as by the tourists.

Without baseline data on bird numbers and empirical verification of birds' behaviour, definite conclusions are not feasible.

The following observations were made during a Vestmanna bird cliff tour and during other trips around the Faroes:

- Irrespective of bird numbers, the Vestmanna trip is spectacular and highly recommended for its scenery.
- The boats alarm birds, seemingly from the motor's noise. Frequently, though, no change in behaviour was observed in birds on cliffs and the boat often travelled to within 5-10 metres of birds on the water before they dove. Irrespective, seabird disturbance tends to be

measured by increase in heart rate and other metabolic changes which cannot be observed externally (Fowler, 1999; Giese, 1996; Nimon *et al.*, 1996) or is most obvious and damaging during egg incubation (e.g. Rodway *et al.*, 1996).

- Continually travelling extremely close to birds is not necessary to enjoy the trip, part of which involves sailing through spectacular grottoes and around cliff-lined inlets. Some of these areas have been closed due to rockfalls, hence similar restrictions could be imposed for protecting birds. By limiting the number of inlets which are used and by rotating them—each year or by another timeframe—the trip’s enjoyment would not be curtailed, but the disturbance of birds would be significantly lessened.
- Vestmanna is not the best place in the Faroes for bird watching. The islands of Mykines and Nólsoy are both easy day trips from Tórshavn, yet permit visitors to get much closer to more birds than Vestmanna without the motor noise of Vestmanna boats. Mykines, though, requires an hour-long ferry ride through turbulent waters followed by an hour-long hike over moderately difficult terrain. The best sites on Nólsoy are a two-hour walk from the ferry harbour across moderately difficult terrain. The access issues mentioned for Koltur also apply to bird watching in the Faroes. Visitors should understand the country and terrain before they choose to travel and many people would have neither the ability nor the inclination to reach the desired locations.

The National Tourist office in the Faroes has recognised the above points and is seeking a compromise with the boat operators. In particular, a voluntary code of staying at least 200 metres away from bird cliffs during the bird breeding season of 1 May to 1 August has been proposed. Boats would still be permitted to approach closer to birds on the water with the note “Be cautious when sailing close to birds—do not sail too fast or zig-zag”. If the Vestmanna trip were promoted for the scenery as much as for the birds and if visitors were told why the cliffs were not being approached too closely, loss of revenue for the boat operators would be unlikely. In contrast, a small encouragement to visit outside the breeding

season would exist which could increase revenue in traditionally low-visitor months (no such impact would be expected for August, since that is the high season).

Koltur and Vestmanna exemplify the vulnerabilities of small island heritage and the possibilities for reducing those vulnerabilities. Koltur is a site with significant heritage which requires increased visitor numbers to sustain it, but not too many visitors or else it will be unsustainable. Vestmanna is a site already experiencing the possibility of too many visitors. These cases, however, provide practical ways forward to manage the vulnerabilities of the heritage, thereby aiming for sustainability.

4.4 Rathlin Island, Northern Ireland

Rathlin Island (Figures 4.4.1 and 4.4.2), lying about 5 km off the Antrim coast and about 25 km from Scotland, was Northern Ireland's only inhabited island in 2003. At its widest, the island is about 1.5 km across, but its L-shaped length yields an area of approximately 14 km². Evidence of on-island human activity dates back to 9,000 to 7,000 years ago and Rathlin porcellanite was used to make stone axes during the Neolithic period, about 8,000 to 4,500 years ago. In recent centuries, the population peaked at 1,200 in 1784, but since then a steady decline has yielded a 2003 population of just over 80. Ferry is the only public transport available for reaching the island. Further sources of information about Rathlin Island are listed in Appendix A.

Rathlin Island is a useful case study due to the collaboration between NT and the islanders which could serve as a model for other locations with similar issues. This collaboration is focused on NT working with Rathliners:

- To provide the form of investment which the islanders desire.
- To ensure that NT properties serve the community as well as visitors and NT's goals.
- To develop and maintain a sustainable community.

NT owns small amounts of the natural and built heritage on the island and is considering opportunities to purchase more. Table 4.4.1 provides examples of Rathlin's heritage and vulnerabilities.

Figure 4.4.1: Rathlin Island's Location
(Modified from map at <http://www.multimap.com>)



Figure 4.4.2: Rathlin Island Map
(Modified from <http://www.ballycastle.free-online.co.uk/places/rathlin/rathlinmap.htm>)

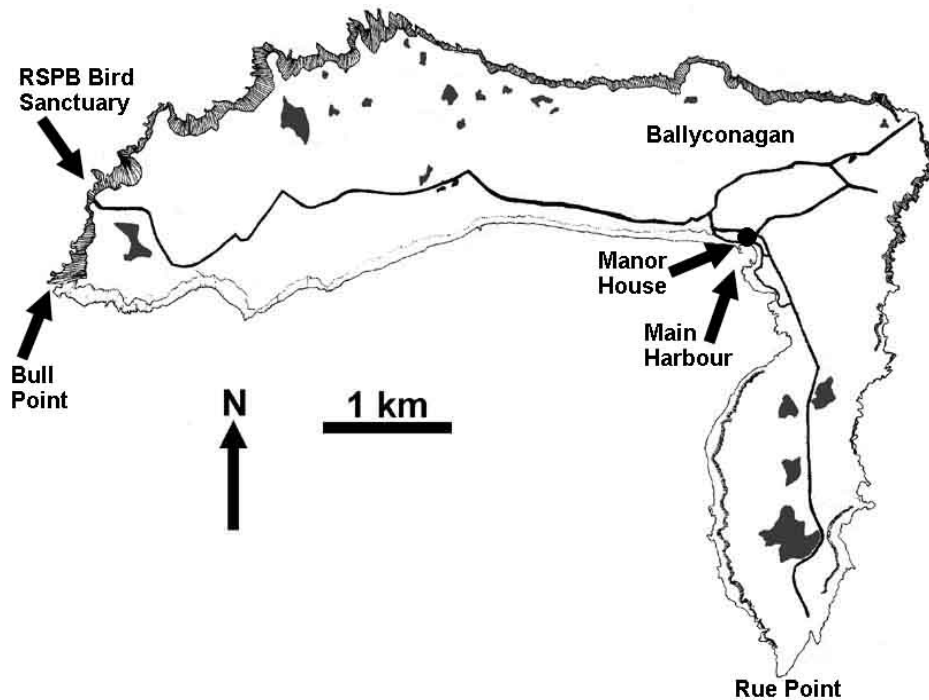


Table 4.4.1: Rathlin Island’s Heritage and Vulnerabilities
 (Words in bold in each cell indicate the levels at which to tackle each example, based on the categories in Table 4.1.1. The examples highlighted in grey are discussed further in this section.)

	Event-based Vulnerabilities		Ongoing Vulnerabilities	
	Environmental	Non-environmental	Environmental	Non-environmental
Historical, Social, Cultural, or Built Heritage	Extreme storms damaging built heritage. •local •community / government	A breakdown of the ferry or crew strikes severing transport links temporarily. •local •community / government	Driving rain and wind causing maintenance problems for Manor House. •local •community / government	NT losing the trust of the Rathlin community. •local / national •community / government / private sector
Natural Heritage	Extreme heat or cold damaging the vegetation in Ballyconagan. •local •community / government	A ship running aground and coastline being damaged through rescue and recovery activities or due to the wreckage. •local •community / government	Wave- and surface-water induced cliff erosion. •local •community / government	Contamination from shells and pellets left behind by sport hunters. •local •community

The desire for emigration and the lack of interest in building and maintaining a sustainable small island community is one of the main challenges facing Rathlin’s heritage. Manor House on Rathlin (Figure 4.4.3), owned by NT, could play a central role in sustaining the Rathlin community. Manor House is operated mainly as a guest house, but the property includes community-orientated rooms such as a nurse’s clinic, an Irish Gaelic classroom, a pottery and crafts workshop used by islanders and visitors, and offices for the Rathlin Island Co-op.

Figure 4.4.3: Manor House on Rathlin



Showcasing good environmental and sustainability practice is one of the operational goals of Manor House. Examples are:

- A no smoking policy is actively encouraged.
- Paper, ice cream tubs, margarine tubs, and glass jars are reused as much as possible along with organic waste which is composted.
- Paper, glass, plastics, and aluminium are recycled.
- Recycled paper products are purchased.
- Visitors are encouraged to take their rubbish off the island.
- Local products are purchased whenever possible and organic produce is grown in the Manor House's garden, in which greenhouse-type structures have been built (Figure 4.4.4).
- Employees live on Rathlin.
- Low energy light bulbs are used and much of the hot water is passively solar heated.
- Laundry is air dried, either outdoors or indoors.

None of these methods is especially innovative, but they are simple, effective, economic, and aid Rathlin's progress towards sustainability. Implementing such practices illustrates a clear concern for the community in which NT owns property. Additionally, demonstrating and promoting good practice would hopefully inspire other locals to act similarly.

Figure 4.4.4.: Growing Organic Produce in Manor House's Garden



The goal for Manor House is creating a sustainable living and community centre. Not only is the built heritage of Manor House preserved, but also its place of importance in the community is augmented and opportunities are created for the community, thereby helping to preserve the community and the island.

For example, mistrust of NT goals and attitudes within a community is a frequent concern for NT when acquiring properties. Rathlin had this concern too, but that was balanced by some Rathliners' initiative in approaching NT to see how NT could be involved in the island and support a sustainable community. Sensitive, honest interaction with the Rathlin community assisted in allaying fears and in ensuring that NT activities and policies were appropriate for the island.

Further complexity emerges due to competing interests on the island. Rathlin interests sport hunters who would wish to make the land amenable to pheasants and the community amenable to shooting birds. As well, developers are building houses to be used as weekend or summer cottages. Many Rathliners are concerned about both these activities because they feel that these activities do little to support the local community and culture. The debate is ongoing and is amplified by the smallness and isolation of the island community.

NT, as an outside organisation trying to become a local supporter, has had to carefully balance the combination of Rathliners' wishes, the path towards sustainability, NT policies, and other like-minded organisations' policies without imposing or appearing to impose outsiders' dictums. As NT (2000) writes, "People are not willing to accept the impositions of a remote or institutional authority. They do not want to have conservation done to them". NT, as a landowner with strong community stakes yet balancing national and local interests, can have a significant impact on a vulnerable island and that island's heritage.

The approach adopted at Manor House is targeted on reducing such vulnerability. In addition to the aforementioned contributions to the community, Manor House seeks tourists who would stay on-island and who would become involved in Rathlin. Aside from the direct presence of providing high-quality, environmentally-friendly accommodation, activities and tours liable to assist the local economy and culture are promoted.

A specific example occurred from 26-27 July 2003 when NT and the University of Ulster's Coleraine campus jointly organised a weekend crafts tour to Rathlin. Attendees stayed at Manor House and activities included pottery-making and traditional basket weaving. Similarly, in October 2003, Rathlin was the venue for a Countryside Exchange Programme involving American, Canadian, and UK experts. They stayed at Manor House and used Rathlin as a case study to investigate heritage and community sustainability. The experts were informed by Rathliners and their results will contribute to the island. These two models of activities could be used to develop other themed visits or workshops—such as nature, history, shipwrecks, or environmental management—possibly involving longer on-island stays.

An interesting heritage issue is exposed by shipwrecks. More than fifty ships have sunk around Rathlin since 1800, including several World War I and World War II vessels, yielding a wealth of history, memorials, and diving opportunities. These sites are now part of Rathlin's heritage as well as a possible incentive for tourist visits. Shipwrecks, however, have

the potential to damage coastline or historical sites, particularly with the essential rescue, recovery, investigative, and commemorative activities. The old shipwrecks are valued, yet complementing new shipwrecks are undesirable. At what point does a contaminant and unwanted event become a welcome part of a place's heritage? Where lives have been lost, especially where the majority of the population on a small island has been affected, are events and their sites of occurrence appropriate for marketing tourism?

Attempts to tackle such questions, even if definitive answers are not forthcoming, assist in defining the heritage management goals for a location. Sustainability implies understanding the meaning of the heritage to the community as well as ways of exploiting, without damaging, that heritage for the community.

4.5 Conclusions

A brief overview of each case study has been presented in order to start discussion, to indicate the research which was completed, and to suggest the complexity which arises from, and the material available about, the case study sites. This summary is representative of the information and issues which were used to formulate the outcomes discussed in the next section. Other examples are discussed where relevant, but the references cited and sources listed in Appendix A provide further details.

5. Outcomes

5.1 Introduction

The three case study sites were not examined in isolation, but as part of an effort to bring together relevant and useful themes whilst understanding the wider context in which vulnerabilities to small island heritage would be managed. This section describes the outcomes which have emerged from comparing the sites and scaling up the results.

Neither a detailed method nor a background to other similar studies is provided. Instead, a self-contained package linking policy and operational suggestions is presented in a framework developed during this project. Further examples from the case study sites, additional to those presented in section 4, are provided where appropriate.

5.2 Overview

Earlier sections have illustrated the wide-ranging issues relevant to managing vulnerabilities of small island heritage. A method of organising the collected ideas and suggestions into a coherent form is needed. A three-level hierarchy is proposed.

Ethos statements

Ethos statements are axioms stating the interest in managing vulnerabilities of small island heritage. They define the basis for tackling these issues, thereby setting initial boundaries on the solutions which are considered. Ethos statements provide the starting point for both general discussion and NT's activities.

Guiding principles

Guiding principles delineate an overall strategy. Ethos statements define the starting point, but they must be effected, for example by NT. Therefore, using the ethos statements as the base, the guiding principles describe the key elements and ideas which should be followed when managing vulnerabilities of small island heritage.

Operational manuals

Principles must work in practice. The ethos statements and guiding principles must be operationalised so that people carrying out the work of managing vulnerabilities of small island heritage know how to achieve their tasks. An operational manual articulates what to do

and how to do it. Several manuals might be needed for different levels of specificity. Rather than presenting complete, usable operational manuals, the basis upon which manuals could be produced is discussed.

5.3 Ethos Statements

Proposed ethos statements (see Section 5.2) are:

1. Small island vulnerability must be reduced to achieve sustainability.
2. Heritage organisations should show leadership in reducing vulnerability and achieving sustainability.
3. For NT, core priorities should be relevant to managing vulnerabilities of small island heritage.

1. Small island vulnerability must be reduced to achieve sustainability.

Accepting that vulnerability management is an inherent part of sustainability, particularly for isolated locales, is relatively innovative (e.g. Lewis, 1999; Wisner and Fordham, 2001). The material and lessons from the case studies confirm the importance of tackling small island vulnerability in order to understand sustainability problems and to develop solutions. Increased recognition of, and better publicity for, that importance is needed to place small islands appropriately within the wider coastline, ocean, national, regional, and international contexts.

In particular, threatening hazards often cannot be altered or efforts to alter hazards would augment vulnerabilities. Instead, the focus should be on vulnerability so that changing people's attitudes, behaviour, and expectations is paramount. Increased recognition of, and better publicity for, the role of vulnerability reduction is needed to incorporate it appropriately into heritage management and sustainability activities.

2. Heritage organisations should show leadership in reducing vulnerability and achieving sustainability.

Although heritage is not the only aspect of small islands which could be used to achieve sustainability, its contribution is often undervalued. Notably, NT frequently leads through setting the heritage agenda and through promoting key areas and themes. The Neptune Coastline Campaign is a prominent example. This energy and forward thinking in heritage leadership should be part of the ethos for any heritage organisation and should be applied towards reducing the vulnerability of small island heritage.

3. For NT, core priorities should be relevant to managing vulnerabilities of small island heritage.

Ethos statements 1 and 2 apply to all stakeholders involved in sustainability. They should be adopted by everyone affected by or affecting the issues covered by this report. To meet this work's need of being relevant to NT (section 1.2), an ethos statement specific to NT is appropriate too.

NT (2001a) lists three “core priorities” for NT. With explanations of how managing vulnerabilities of small island heritage matches these priorities, they are:

- Showing leadership in the regeneration of the countryside.

This core priority matches ethos statement 2. The innovation and forward-thinking required for properly managing vulnerabilities to small island heritage would illustrate leadership by addressing an important yet undervalued issue. Due to the usual marginalisation of small islands, significant input into regenerating the countryside would also be achieved.

- Lifelong learning and education.

One concern articulated is that NT could be seen “as remote or even irrelevant” (NT, 2001a). This concern equally applies to both islands and vulnerability management.

Continued education and learning are essential for ensuring that vulnerability management activities become normal practice in heritage management and that small islands receive the detailed attention they deserve.

- Deepening people's understanding of our landscape, built and cultural heritage and broadening its appeal.

The exploration of vulnerability management for sustainability yields a strong understanding of the principal threats to sustainable heritage management and possibilities for dealing with these threats. Small islands present an opportunity to gain a deep understanding of vulnerability and sustainability for heritage management, particularly in landscapes and locations important for the UK. The lessons could then be promoted, broadening the appeal of such work and publicising the implications.

Despite the importance of these core priorities, they are based on a National Strategic Plan which lasts only until February 2004 (NT, 2001a). Before then, NT strategies and priorities will be revisited and potentially revised. To ensure their comprehensiveness, their relevance to important UK heritage, and NT's leadership and innovation, continued relevance to managing vulnerabilities of small island heritage is essential.

5.4 Guiding Principles

Proposed guiding principles (see Section 5.2) are:

1. Taking or creating risk can be appropriate.
2. Heritage can build and sustain communities.
3. Be clear and honest about needs and capabilities.
4. An all-vulnerability approach should be considered.

1. Taking or creating risk can be appropriate.

Creating sustainable communities is neither simple nor straightforward. Choices must continually be made regarding programmes to implement along with resource allocation. At times, it is important to try new approaches or to make an investment which might not have immediately obvious paybacks.

An example relates to the importance and role of Manor House on Rathlin, as described in Section 4.4. In 2003 and previous years, Manor House was not profitable because operational costs were high and the building had a backlog of repairs. NT had a total backlog of repairs of approximately £180 million as of 2003 (Magnus, 2003), so this situation is not unusual. For Manor House, an opportunity exists now to secure the property's place as a sustainable community centre and to have a significant impact on the island, as long as Rathliners accept that approach. Immediate investment at a high level would permit the appropriate level of staffing for using the Manor House to its fullest extent. For example:

- Active initiative for and promotion of specialty tours with overnight stays such as the University of Ulster's weekend trip.
- An expanded garden providing even more produce for the restaurant.
- Detailed environmental audits to see how to further reduce resource use.
- Proactive activity to use the Manor House as an executive retreat or corporate conference centre, particularly during the low season. The Countryside Exchange in 2003 demonstrated the viability of this suggestion.
- Establishing a fast internet cafe in Manor House.

Such activities have the potential to either lower costs or generate revenue, particularly beyond the short-term, however the risk of investment is required.

This risk is amplified because Rathlin's population is declining. A possibility is that any efforts at building up Rathlin's community would be lost through emigration. If Manor

House could succeed in being profitable, the revenue brought to the island and the encouragement given to the islanders could be enough to sustain Rathlin.

In many ways, investment in Manor House in the hope that a payback would be earned could be a self-fulfilling prophecy. The act of investing and the promotion which would be an outcome of that investment could be enough stimulus to reach the desired goal, as long as Rathliners would support this approach and would be willing to take advantage of it. The choice would be the community's.

Rathlin's Boathouse Visitor Centre (Figure 5.4.1), for example, was established after intensive lobbying by Rathliners trying to reduce unemployment. When the job of running the Boathouse was advertised, no applications were received. The Boathouse is now run by those who lobbied for it, even though they do not need the work. A community which supports the development of a sustainability opportunity must be prepared to grasp that opportunity. Preventative measures would help to avoid recurrence of the Boathouse situation, thereby lessening the investment risk.

Figure 5.4.1: Rathlin's Boathouse Visitor Centre



The self-fulfilling prophecy of investment in Manor House could work in the opposite direction too. If the investment risk were deemed to be too great, then less promotion of and

activities in Manor House would occur. Further income would not be generated, potentially leading to a slow decline of Manor House paralleling that of Rathlin, further exacerbated by the lack of confidence which non-investment displays in Rathlin. NT could be the deciding factor of Rathlin's sustainability through the chosen investment strategy.

Even if appropriate investment were completed yet the Rathlin experiment failed to bring sustainability to the community, labelling the investment "lost" or a "failure" would be short-sighted. As with the Boathouse, lessons can be learned and applied to improve future chances of success. NT could continue its leadership and creativity on sustainability issues through investing in Manor House with the risk of financial loss knowing that, irrespective of the financial outcome, the overall gain would be immense.

In this sense, taking or creating investment risk can be appropriate. If such action does not immediately lead to or catalyse sustainability on Rathlin, then the learning gained would pay back in future ventures.

2. Heritage can build and sustain communities.

Heritage can be vital for building and sustaining communities, therefore this concept should be used as a guiding principle. NT is increasingly following this pathway, as shown by Brownsea and Rathlin along with non-island sites (e.g. NT, 2001b).

This philosophy is different from "purchase and manage", i.e. buy a property and do what the purchaser wishes to do within the boundaries of that property. Instead, the philosophy of building and sustaining communities factors in community desires and needs—and differentiates desires from needs. In making decisions on managing properties and promoting heritage, surrounding people and properties must be considered and consulted for reducing vulnerability, and achieving sustainability.

3. Be clear and honest about needs and capabilities.

The processes of taking risks and building sustainable communities as discussed in Guiding Principles 1 and 2 respectively include many challenges, some of which might not be immediately solvable. Therefore, in undertaking such responsibilities, NT must be clear to itself and to the communities about NT's own limitations. Furthermore, attempts should not be made to create a community which is different from the heritage resources available.

This issue was poignant on the Faroes and Rathlin. For the Faroes, section 4.3 discussed the "We are not in the package holiday business" principle with respect to Koltur. This principle applies to the rest of the Faroes and to NT properties such as those on Rathlin. If visitors have little interest in exploring the richness of a location irrespective of weather, then Rathlin and Faroe holidays might be precluded. NT's documentation on Rathlin and Brownsea, for example, are straightforward about the activities available and this principle should be continued.

Locals, as well as tourists, should not have inflated expectations of NT's capabilities and resources. NT is not a saviour, but instead is one component of a viable community. On Brownsea, for example, coastal erosion is a major concern. NT owns the island yet nonetheless can do little to prevent the erosion if it arises naturally. If human activity, such as boat wakes or walking contribute to the erosion, then possibilities exist for countering the process. This distinction, along with the well-established detrimental effects of relying on structural sea defences (e.g. NT, 1995 and NT, 2003), should continue to be described to Brownsea residents and visitors to be certain of their understanding of, and cooperation on, NT's management strategy for the island (see also Etkin (1999), Fordham (1999), and Kelman (2001) for arguments and evidence against reliance on structural defences).

Where NT does not own the entire small island, such as on Rathlin, further care is necessary. NT might have plans for sustainability, but the community might wish otherwise, preferring, instead, easy, short-term gain. The drive to build hotels near NT's property

Giant's Causeway in Northern Ireland and the plans for vast wind turbine farms in scenic parts of rural Wales (e.g. Kelman, 2002; NT, c. 2002) are two examples where sectors of the local community strongly support immediate development for short-term gain rather than trying to develop long-term solutions.

Small islands have small communities. Cases could arise where the majority of the community prefer short-term gains to sustainability, even after extensive attempts to convince them otherwise. Opposing such will from outside, particularly against a close-knit population, is unlikely to succeed. This form of conflict is draining, often destroying parts of what is sought to be preserved. NT, at times, might therefore wish to use their resources more effectively than fighting. Fortunately, no case studies of such a situation have been found and hopefully none will arise. Part of the principle of being clear and honest about needs and capabilities, however, leads to the realisation that situations might exist where withdrawing from a battle might be the most appropriate compromise, despite the loss of heritage.

4. An all-vulnerability approach should be considered.

The challenges and complexities encountered at the case study sites suggest that separating specific issues, such as those in each cell of the tables in section 4, might not be the proper manner for seeking long-term solutions. The vulnerabilities of small island heritage, and most other heritage, cover:

- All time scales: immediate, short-term (e.g. day-to-day), medium-term (e.g. decade-to-decade), and long-term (e.g. millennium-to-millennium).
- All space scales: site, local, national, regional, and international.
- Environmental vulnerabilities (e.g. storms and waves), non-environmental vulnerabilities (e.g. disinterest and oil spills), and combinations of vulnerabilities (e.g. erosion from natural and human sources).

- Event-based vulnerabilities (e.g. a hurricane, an earthquake, an oil spill, or a train crash) and ongoing vulnerabilities (e.g. crime, vandalism, sea-level rise, and loss of interest in heritage).

Although specific vulnerabilities are describable, as shown in the tables in section 4, no solution should avoid the wider context. Vulnerability management should become part of sustainability and development processes rather than trying to separate out vulnerability management from the day-to-day or century-to-century processes of managing a property.

Table 5.4.1 provides some examples.

Table 5.4.1: All-vulnerability Approaches

Island	Specific Vulnerability	Wider Community Issue
Brownsea	Coastal locations and coastal heritage are vulnerable to erosion and sea-level rise.	How much of island shall remain in the long-term? Could the island be maintained without the lagoon, cottages, and castle? How would losing those properties impact the residents and their commitment to Brownsea?
Faroes	Heritage, such as the buildings on Koltur and St Magnus Cathedral (Figure 5.4.2), could be damaged by extreme weather events.	How much investment is needed to develop and maintain heritage sites, and to protect them from extreme events, compared to the revenue gained through increased tourism? How much would the Faroese gain from protecting their heritage compared to what tourists would gain?
Rathlin	Sport shooters leaving shells and pellets after their shoots.	If the islanders strongly wish to support sport shooting and could not be convinced otherwise, should NT oppose them? What revenue and sustainability opportunities would sport shooters bring to Rathlin compared to activities more related to NT's interests?

Figure 5.4.2: St Magnus Cathedral, Kirkjubøur, the Faroes
(The covering protects the stonework from the wind and rain so that it can dry out to be properly restored.)



In practice, this guiding principle is mainly common sense, although common sense is not necessarily always displayed in these situations. Dealing with heritage vulnerabilities should be an integral, rather than separate, part of heritage development and management.

5.5 Operational manuals

The aspects of operational manuals examined (see Section 5.2) are:

1. Scope.
2. Content.

1. Scope

An operational manual could be highly specific to a case study or to a type of heritage or the manual could be generic, covering a range of properties. For example, in October 2003, a management plan was being written for Brownsea Island. The small island nature provides well-defined boundaries for the plan implying that a wide scope of operational

activities could be included. An example is a line-by-line emergency response plan, both in general and for specific incidents including an oil spill, a sea defence breach into the lagoon, a mass casualty scenario, and an island evacuation. While the manual's model and structure could be applied to other locations, the document for Brownsea would be a Brownsea Island Operational Manual with all material written specifically for that site.

The Faroes provide another example. Each locality which chooses can apply for funds from the Faroese government to set up a local museum. These museums display items of local interest, potentially covering nature, history, culture, and social development. They are managed locally with the local community as the main audience. The advantages include generating pride in local achievement and heritage; providing employment and skill-learning opportunities; attracting Faroese and foreign tourists to the locality; and having a focus for further research into and work on the area's heritage. Initiating and maintaining a museum is not simple, hence an operational manual for managing a local museum would be of use. This manual would be task-orientated rather than location-specific.

A general operational manual for managing vulnerabilities of small island heritage might also be helpful. Such a document would outline the ethos statements and the guiding principles which oversee the operations and would provide case studies of good and bad practice. Advice in the form of checklists (e.g. vulnerabilities to consider), communication practices (e.g. dealing with media), and sample plans (e.g. oil spill response plan) could be incorporated. Other items could be legal responsibilities of property managers, a checklist of good environmental practices to consider, and a reference sheet of relevant contacts.

VSCG (2003) is an example of a vulnerability-related general operational manual in which NT has been involved. A general operational manual specific to small island heritage could emulate its structure and style. While relevance to NT is pertinent, relating operational manuals beyond NT's work would engage the wider community and could yield adaptable tools for self-help.

2. Content

Irrespective of a manual's scope, the content should have detailed suggestions on possible operational practices as well as general notes on what NT or others seek in running a property. Emphasis on anecdotes of good and bad practice assists in communicating and generating ideas.

Examples of general operational notes specific to managing vulnerabilities of small island heritage are:

- Do not try to keep secrets in a small community. Rumours would inevitably spread and could damage short-term and long-term efforts. NT's involvement in Rathlin is an excellent method of working with a community and earning their cooperation from the beginning.
- Limited resources on small islands implies that forging alliances is essential for sustainability. Examples of the high benefits and low costs of collaboration are the cooperation between NT and the Dorset Wildlife Trust on Brownsea and the cooperation between NT and the Rathlin Co-op on Rathlin.
- Using NT's social, political, and financial clout in support of communities with their cooperation can save the community, as suggested in the discussion on Rathlin in Section 4.4. Using such clout against communities, even to protect significant heritage, is unlikely to be successful on a small island.
- The close interconnectedness of society and all systems on small islands implies that separating different types of heritage might not be feasible. The Faroes, in particular, demonstrated the intensity to which the people and their culture and history have been shaped by the natural heritage and how the natural heritage has been shaped by the people and their culture and history.

Examples of good practice anecdotes from this project's case study sites are:

- On both Rathlin and Brownsea, the salary of nature wardens is paid by more than one organisation, thereby enabling the position to be staffed full-time. Due to size, small islands

tend to require less overall staffing than larger locations. Pooling resources in this manner ensures that someone will be paid full-time thereby making the job a viable career. As well, cooperation amongst organisations is enhanced.

- On Rathlin, Manor House's environmental practices and, as important, communication of those environmental practices to visitors and Rathliners.
- The Faroes National Tourist Board consulting with stakeholders and ornithologists before producing a voluntary code of conduct for operating tours to the Vestmanna cliffs.

5.6 Conclusions

Ethos statements, guiding principles, and possibilities for operational manuals have been proposed with respect to managing vulnerabilities of small island heritage. The discussion was based on observations in and lessons learned from the case studies. A theme integrating this work is that the vulnerabilities of small island heritage cannot be properly explored without considering the sustainability of the heritage and the small island. Similarly, sustainability cannot be achieved without properly considering the vulnerabilities present. Vulnerability management and sustainability must be connected to ensure that small island heritage and small island communities do not succumb to their smallness, isolation, and fragility. Instead, those traits should be used as advantages to achieve sustainability.

6. Limitations and Boundaries

Previous sections discussed the case study sites and yielded a framework for identifying and communicating issues regarding managing vulnerabilities of small island heritage. The overriding theme to appear was using heritage and vulnerability management of that heritage for sustaining small island communities. The implication is that NT should continue and expand work in this area.

Sections 1 and 2 bounded discussion at the outset. The suggestions in this report might thus be appropriate for only the case studies examined. Further limitations occur, as detailed in this section.

The bounds and limitations should neither dissuade from nor preclude attempts to implement the suggestions. Instead, they are a caution that care is needed for, and that questions should always be asked about, strategies adopted and activities undertaken. The questions might not be answerable, but asking them is an essential process.

1. Suggestions might conflict.

The ethos statements, guiding principles, and operational feasibility might conflict or contradict. Rules or specific statements on resolving such occurrences are not feasible, but flexibility and a focus on practicality are important. Case-by-case decisions would be the most appropriate resolution method implying that inconsistency might result. Inconsistencies should be acknowledged and described with justification or explanation provided.

2. Investment limitations.

Some of the proposals require initial or continuing investment. Despite the solid principles involved in providing such investment, it is impossible to be losing money all the time and for all projects undertaken. Although taking and creating risk might be appropriate in many circumstances, care must be taken that financial risks are manageable in the worst-case scenario. Appropriate assessment, monitoring, and evaluation of projects should be undertaken to determine the outcome of the risk taking and whether or not the decision-making process yielded the best results.

3. This project is not comprehensive.

This project does not cover all issues or provide full details on the issues covered. Continuing research into this topic, both the case studies presented here and other case studies, would be needed. Such activity would also assist in promoting NT knowledge and conclusions to others. In addition to helping the dissemination of the findings here, others might be inspired to follow or to support similar work, thereby contributing further to managing vulnerabilities of small island heritage.

4. Islands and coastlines have differences.

This report suggests parallels between islands and coastlines, yet differences exist. One example is the use of NT's clout such as along the Giant's Causeway coastline in Northern Ireland. This clout boosts NT's opposition to proposed development plans near Giant's Causeway which are short-term and advantageous for mainly the proposer.

This report implies that NT's clout in Northern Ireland could be used to support Rathlin's sustainability. The relative isolation and smallness of Rathlin compared to the internationally-renowned Giant's Causeway could result in less impact of NT's clout on Rathlin than for Giant's Causeway—or, perhaps, more impact. Case-by-case analyses and extreme care in applying the general principles to all case studies would assist in realising differences between islands and coastal communities and, most importantly, factoring those differences into actions taken.

5. Legal barriers.

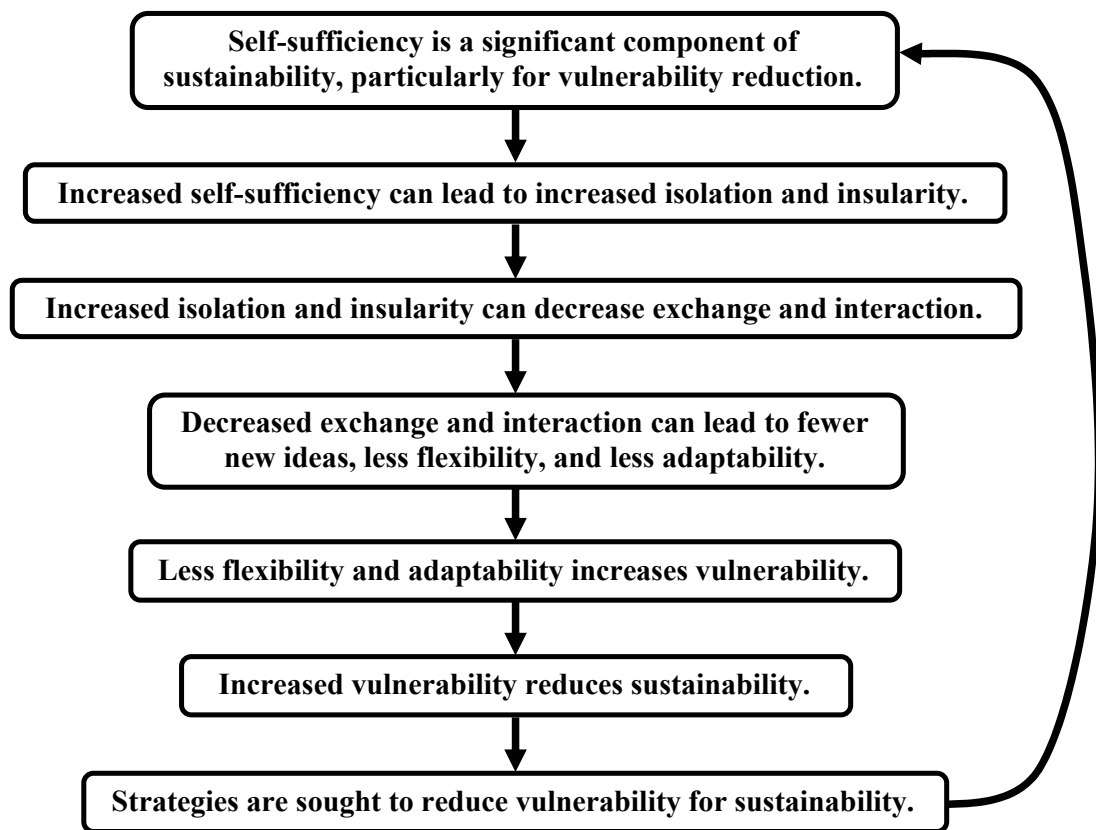
Legal barriers might exist to implementing the preferred pathway. For example, The UK government (SCA, 1998) suggests that the EU's Habitats Directive (CEC, 1992; EC, 2000) and Birds Directive (CEC, 1979; EC, 2000) create an obligation on the government to protect natural heritage even where that action would entail constructing structural sea

defences. Structural sea defences are often detrimental to sustainability (see sections 4.2 and 5.4). Therefore, in this instance, the legal obligation would be for natural heritage management which increases community and heritage vulnerability.

6. Sustainability-insularity cycle.

Figure 6.1 suggests a theoretical cycle—untested in reality—for isolated communities such as islands, which suggests that a stable state of self-sufficient sustainability might not be reachable. The best achievable could be an endless loop around the cycle. The cycle is not absolute and other influences occur, but it suggests a possible pathway which might occur if active avoidance steps are not taken. Out of the case study sites, the Faroes would be the most susceptible and Brownsea would be the least susceptible to the cycle.

Figure 6.1: The Sustainability-Insularity Cycle



Empirically verifying the sustainability-insularity cycle would require lengthy observations of an island. Historical studies would be one option. Contemporary studies would require a small island which has attained adequate self-sufficiency to be quasi-sustainable and, hence, to potentially start the cycle.

7. Recommendations and Conclusions

7.1 Recommendations and Lessons

This work has brought together concepts of heritage management, small island development, sustainability, vulnerability, risk, and disasters. Specific strategy and operational recommendations result along with overall, more generic lessons.

Recommendations to enact are:

1. Support small island networks and networking.
2. Create funds and fundraising drives for small islands.
3. Implement small island projects.

1. Support small island networks and networking.

Two networks are needed: Islands of the National Trust (ISLANT) and Small Island Vulnerability Reduction (SILVR).

ISLANT would be a forum to bring together stakeholders of NT's small island properties. Exchange of ideas, lessons, successes, and failures would be encouraged. In addition to the education and exchange functions, ISLANT would provide support to islanders and to small island property managers in sustaining NT's small island heritage and the small island communities. The network would also be NT's small island voice and conscience, promoting NT's small island interests within and outside of NT.

SILVR would be operational, undertaking proactive projects to reduce vulnerability on small islands. Activities could include:

- Restoring and running heritage sites.
- Advocacy on various topics such as climate change, sea-level rise, European or UN support for remote areas, national education policy for schools with few pupils, or localised environmental and vulnerability concerns.
- Training islanders in specific vulnerability reduction activities such as vulnerability mapping, contingency planning, public involvement in disaster preparedness, and building resilient lifelines.
- Creating venues for exchanging skills, experiences, and ideas, both inter-island and between islands and non-islands.

SILVR would not be exclusive to NT but would promote the use of heritage to achieve sustainability.

2. Create funds and fundraising drives for small islands.

The Neptune Coastline Campaign is an example of a fundraising campaign targeted at a specific type of property. A similar fund would be appropriate for purchasing, maintaining, and creating sustainability for small islands and small island properties. The review and relaunch of Neptune is an opportune moment to consider two possible pathways:

- A separate fund for small islands.
- A set proportion of Neptune funds, perhaps 15%, earmarked for small islands.

Small islands would not be the only type of land which could be targeted in this fashion. Heathland, mountains, and fenland could also be considered along with the continuing focus on coastlines. Small islands, though, should be mentioned explicitly.

3. Implement small island projects.

The Year of the Sea 2005 presents an opportunity to support projects specific to the small island theme. Resources from the Year of the Sea programme could be requested plus

other grants could be sought to link with the Year of the Sea programme. The importance of the sea and sea-linked heritage to the UK and other EU islands could be emphasised, but the British Overseas Territories including the Falklands and Gibraltar should also be considered due to their connection with the sea and their importance to the UK.

The advantages of small island projects include:

- With NT taking the initiative and becoming the focal point for such projects, NT gains resources.
- International linkages are forged and promoted.
- Knowledge and skill exchange occurs which would enhance capabilities in NT and on islands.
- Positive publicity is generated, which could inspire others to follow NT's lead and which could generate further resource opportunities.

The Year of the Sea would not be the sole background to potential projects. NT should consider allocating resources to implement other island-specific projects, for example ISLANT and SILVR (recommendation 1), in order to gain the initiative in and benefits from providing leadership on small island matters.

The main general lessons are:

1. Managing vulnerabilities of small island heritage can assist in building and sustaining small island communities.
2. Articulating both principles and operational practices is useful for understanding methods to follow and actions to take.
3. Any case study and any heritage project should consider the wider context.
4. Beware the limitations of this work before implementing any suggestions.

These lessons apply to the three case studies examined in detail in this study, to their wider contexts, and to other case studies which could be explored in further work.

7.2 Further Work

Given the importance of the issues discussed and the limitations mentioned, stopping the investigations with this report would be inappropriate. Delving deeper into the ideas and proposals would assist in ensuring that the recommendations reached here are adequate.

Three main areas of further work would be needed:

1. Deeper theoretical development.
2. Further work on the case studies.
3. More case studies.

1. Deeper theoretical development.

More theoretical and conceptual exploration into, and development of, the those, principles, operational recommendations, and main lessons described here would help to define and express them.

2. Further work on the case studies.

More field investigations in the three case study sites examined here, especially to explore the wider contexts further (Table 7.2.1), would be useful.

Table 7.2.1: The Wider Context of Each Case Study for Further Work

Case Study	Wider Local Context	More Expansive Linkages
Brownsea Island	Poole Harbour	<ul style="list-style-type: none"> •Dorset Coastline including the Jurassic Coast (Dorset and East Devon Coast). •Development and sustainability in southern England. •EU and global small island networks.
Faroe Islands	None.	<ul style="list-style-type: none"> •Iceland, especially Vestmannaeyjar. •Scandinavian islands. •Development and sustainability in Scandinavia and the Nordic countries. •EU and global small island networks.
Rathlin Island	<ul style="list-style-type: none"> •Northern Ireland •Southern Hebrides (Scotland) 	<ul style="list-style-type: none"> •Highlands and islands (Scotland). •Irish islands. •Entire island of Ireland. •EU and global small island networks.

3. More case studies.

Based on the last column in Table 7.2.1, selecting further case studies might be the most vital link towards confirming, refuting, or revising this study's results. Specific case studies which would be most appropriate are:

- Lundy Island and the Isles of Scilly in western England.
- The Scottish small islands: the Inner and Outer Hebrides, Shetland, and Orkney.
- Åland, an autonomous and Swedish-speaking province of Finland comprising small islands.
- Bornholm and Læsø, small islands of Denmark.
- British Overseas Territories which are small islands, the most isolated of which are the Falkland Islands, the Pitcairn Islands, St Helena and its Dependencies (Ascension Island and Tristan da Cunha), and South Georgia and the South Sandwich Islands.

Investigations on non-European small islands would also be relevant. To be assured of useful results with strong linkages amongst them, confining case studies to EU-affiliated small islands would be most useful at this stage of the research, even where the islands themselves are not officially part of the EU as in the case of the Faroes and the British Overseas Territories.

7.3 Final Words

The opening words of this report are "In island vulnerability lies island intrigue". The work in this report has confirmed these sentiments while expanding them. In island vulnerability lies island intrigue, allure, inspiration, beauty, hope, development, and sustainability. The same could be said of island heritage.

The challenges of managing the vulnerabilities of small island heritage, and of achieving sustainability through such action, are immense. Yet they are surmountable. This work has demonstrated how to overcome the obstacles, the greatest of which is neither

decaying heritage nor nature's power, but ourselves. Our attitudes and behaviour must change to achieve our goals. We must be inspired to take risks and to overcome ignorance, apathy, laziness, and all other such sins which are the standard barriers of vulnerability reduction and sustainability.

In articulating these concepts through the three case studies examined, the aims of achieving originality, practicality, usability, and relevance to NT have been achieved. The task now is to apply the theory and to make it work. Sustainability is no more of a myth than a myth we choose to create and to perpetuate. Whether or not we shall choose to make sustainability a reality is still an open question.

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Appendix A: Further Information Resources on the Case Study Sites

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