

Tongan Heritage Tourism Scoping Study

Final Report – Volume II

May, 2012

MFAT/Tonga Tourism Support Programme
TSSP 04/2011.
Heritage Site Management

Prepared by:

Institute for Business Research

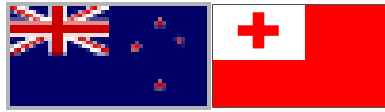


Table of Contents:

Appendix 1 – Terms of Reference	4
Appendix 2. Team roles and expertise	11
Appendix 3 Site Assessment Template.....	13
Appendix 4. Description of pre-selected sites (Current)	16
Appendix 5 Checklists for pre-selected sites	19
Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui	19
Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u.....	27
Appendix 5.3 - Lakufa’anga and Li’angahuo a Maui	34
Appendix 5.4 - Lauua Lookout, ‘Eua Island	41
Appendix 5.5 - Velata Fortress, Ha’apai	49
Appendix 5.7- Feletoa Fortress, Vava’u Island.....	60
Appendix 5.8 - Uoleva Island, Ha’apai	67
Appendix 6 List of community meetings	74
Appendix 7 Key contacts and meetings	75
Appendix 8. Assessments of Site Feasibility by Market Appeal, Robustness and Stakeholder Readiness.....	76
Appendix 8.1 - Ha'amonga a Maui Feasibility.....	76
Appendix 8.2 - ‘Ene’io Beach Walkway/ Lookout Feasibility	77
Appendix 8.3 - Li'angahuo a Maui Lookout Feasibility	78
Appendix 8.4 - Lauua Lookout and Fortress Feasibility.....	79
Appendix 8.5 - Velata Fortress Feasibility.....	80
Appendix 8.6 - Hufangalupe Feasibility	81

Appendix	8.7 - Lakufa'anga Feasibility	82
Appendix	8.8 - Feletoa Feasibility	83
Appendix	8.9 - The Matamahina Feasibility.....	84
Appendix	8. 10 - Uoleva Island Feasibility.....	85
Appendix 9	Requirements for viability and benefits.....	86
Appendix 10	Revenue, Operations and Capital Establishment costs and Year 1 and 2 maintenance	90
Appendix	10.1 - Ha'amonga a Maui: Tongatapu Island	90
Appendix	10.2 - 'Ene'io Beach Walkway and Lookout, Vava'u Island.....	91
Appendix	10.3 - Lakufa'anga and Li'angahuo a Maui, 'Eua Island	92
Appendix	10.4 - Lauua Lookout and Fortress, 'Eua Island	93
Appendix	10.5 - Velata Fortress, Lifuka Is, Ha'apai Group	94
Appendix	10.6 - Hufangalupe, Tongatapu Island	95
Appendix	10.7 - Feletoa Fortress, Vava'u Island.....	96
Appendix	10.8 - Matamahina, Vava'u Island	97
Appendix	10.9 - Uoleva Island, Ha'apai Group.....	98

Appendix 1 – Terms of Reference



New Zealand/Kingdom of Tonga

**SIMPLIFIED TENDER
PROCEDURE**

SERVICE CONTRACT

**TONGA TOURISM SUPPORT
PROGRAMME TTSP 04/2011**

HERITAGE SITE MANAGEMENT

BETWEEN

THE GOVERNMENT OF TONGA

AND

**INSTITUTE FOR BUSINESS RESEARCH
– THE UNIVERSITY OF WAIKATO**

Table of Contents

CONTRACT AGREEMENT WITH ANNEXES	1
ANNEX I: TERMS OF REFERENCE	7
ANNEX II: Key Experts	7
ANNEX III: Budget breakdown for a fee-based contract	8

ANNEX I: TERMS OF REFERENCE

TERMS OF REFERENCE – Scoping, Prioritisation and Delivering Improvements to Heritage and Cultural Sites in Tonga, Heritage Site Management Project, Number: TTSP No.4/2011.

Ministry of Tourism – Tonga

Background

The Tonga Tourism Support Programme (TTSP) is a 3-year, NZD\$4.86 million programme funded by New Zealand. The TTSP aims to support broad based growth in the tourism sector by supporting both the public and private sectors in Tonga. The overall goal is:

‘To significantly increase the tourism sectors contribution to Tonga’s economic growth, whilst supporting environmental and cultural sustainability’.

Tongan culture and heritage are key components of the tourism experience in the country. Tonga’s culture provides it with a unique point of difference, and many valuable cultural heritage sites are located in each Province. However many of the most important heritage sites have fallen into disrepair and are not maintained or well protected; signage is often poor and responsibilities for management of the site do not appear to be well defined. There is a need to document and action sustainable heritage site management plans for the most important cultural heritage sites, including site improvements and responsibilities for site maintenance and management.

a) Support for Heritage and Cultural Site Development

One of the objectives for the TTSP is to improve the sustainable management of Tonga’s key cultural and heritage sites. In summary:

Approximately NZD\$700,000 / 3 years has been earmarked for this activity.

Funding to support the implementation of the individual heritage site management plans will be provided per annum.

Up to \$200,000 will be available for minor infrastructure, signage, communications material and other resources.

b) Support for Regional Tourism Industry Associations

The TTSP also includes support for a Tourism Growth Fund, with approximately NZD\$750,000 / 2 years being set aside. This Fund will support tourism development activities of industry associations and NGOs which demonstrate positive economic impacts. Under Stage One (Industry Associations and NGOs) of the TGF the specifications of each project will be determined by the associations in their respective applications. The maximum project value will be TOP20,000 per Association, but

projects of up to TOP50,000 per Association will be considered on a case by case situation. A high level description of the TTSP, including the TGF is outlined in Annexe III.

c) Project governance and decision points

The TTSP is overseen by a Programme Management Committee (PMC) who are tasked with providing final approvals for all aspects of activity development. The PMC will provide a crucial role in the implementation of this activity, as the PMC will provide approval for the Consultant/s to progress to Phase Two and Phase Three.

OBJECTIVES

The following outputs/outcomes are anticipated for Heritage Site Management Project, Number: TTSP No.4/2011:

Sustainable, locally managed and led heritage and cultural site development in Tonga that contributes to regional and national tourism development.

Phase One

To scope and prioritise heritage and cultural sites for development in Tonga in both Tongatapu and the Outer Islands, based on the recommendations from the PMC;

To outline a high level workplan and budget for implementing the National Heritage Site Roadmap, including a high level cost estimate for each site; and

To outline a sustainable Heritage Site Management Framework to guide the development of individual heritage site management plans in Phase Two. This Framework must recognise address the issue of on-going funding for site management and maintenance, ideally through the use of visitor charges and/or long-term sponsorship agreements.

Phase Two

Agreement for the selected Contractor/s to progress to Phase Two. Phase Two is to design individual detailed heritage site management and implementation plans for 2011, 2012 and 2013 as outlined in the National Heritage Site Roadmap.

Phase Three

Agreement for the selected Contractor/s to progress to Phase Three. Phase Three is to: implement the heritage site management and implementation plans, in coordination and collaboration with the Department of Conservation and/or other suitably qualified organisations.

Parties

The parties to be involved in the development of the Programme are:

The Minister of Tourism

The Ministry of Tourism / Tonga Visitors Bureau

The Tonga Tourism Task Force

Private sector tourism organisations, TTI and TTA

NZAID

MFAT

DOC

Local Nobles, town officers and community groups and local villages for each individual site

Other relevant government departments, aid agencies, businesses and business organisations

Other technical advisors or external organisations as needed

PROCESS AND ASSIGNMENT TASKS

The contractor will report to and liaise with the CEO and the Tourism Advisor of the MoT.

A contract for service will be formed between the MoT and the contractor.

Assignment Tasks

Phase One: National Heritage Site Roadmap and a Sustainable Heritage Site Management Framework

1. National Heritage Site Development Roadmap

The Consultant/s will need to develop a National Heritage Site Development Roadmap (following the methodology outlined in the Technical Proposal for Consultant Services submitted by the Contractor, 30 June 2011) that firstly assesses the feasibility of developing the pre-selected sites, and secondly categorises and prioritises the following pre-selected heritage sites for development in Tonga in both Tongatapu and the Outer Islands as identified by the PMC. These are:

Tongatapu

Haamonga 'a Maui (Trillithon) – Niutoua Village

Terrace Tombs – Lapaha Village

Captain Cook Landing Place – Alaki Village

Hufangalupe – Vaini Village

Blow Holes - Houma Village

Kele'amaka – Vaotuu Village

Ahoeitu-Vaepopua – Maufanga village

First Polynesian Site – Nukuleka village

Haa'pai (tbc)

Lifuka Island

Stone carving at Matafonua Resort

Velata Fortress

European cemetery

Uiha Island (tbc)

Makahokovalu

Burial mount and Tevita Unga Tomb

Uoleva Island (tbc)

Piegon Snaring Mount (Sia heu Lupe.)

Vavau (tbc)

Pouono and cemetery

Feletoa Fort

St Joseph Catholic Church

European Cemetery

Ene'io Beach and Botanical Garden

Ano Lake

Swallows Cave

Mariners Cave

Mt Talau

The **National Heritage Site Roadmap** will also need to include:

The rationale for determining the priority sites for development. This rationale should provide an outline of criteria used to guide the prioritisation of sites (e.g. geography / value for money / overall benefit to the community) that can be used to guide future selection of sites by the PMS.

An assessment of the pre-selected sites, including the feasibility of the improvements and the viability of the investment vs. the benefits to be gained from the improvements.

A proposed timetable for developing and implementing the National Heritage Site Development Roadmap via individual Heritage Site Development Plans over the next 3 years. This timetable will need to outline:

- the sequencing and timeframes of all site investments. This includes the sequencing of work required in each individual site, including timeframe estimates for all work to be undertaken.
- the sequencing the different sites over the term of the three year Tonga Tourism Support Programme (e.g. Years One, Two and Three)

A high level financial plan for site infrastructure improvements and other investments needed at all the prioritized sites. This plan is to be at a high level only, as more costed work will be undertaken as part of Phase Two.

In addition to the Roadmap, the Consultant/s will need to recommend how the Tourism Growth Fund could link to the historical sites investment budget, noting the possible linkages regional tourism associations could play (refer to Appendix One for a high level outline of the Tourism Growth Fund).

2. A Heritage Site Management Framework

As part of Phase One, the Consultant's will also need to develop a framework for managing the sites (although noting that given the diversity of sites, some flexibility in approach will be needed. This framework should include guidelines on the following:

- a) Overview of how the site management plan balances the interests of conservation and maintaining cultural integrity and the interests of those who live and work in the area, and wider tourism economic development benefits;

- b) Sustainable financial management plan, including sustainable options for local community management based on revenue that can be generated from visitors and ideas for increasing that revenue. This plan should include both long term objectives (ten years plus and medium terms objectives (5-10 years) and short-term objectives (up to 3 years);
- c) Sustainable management / governance arrangements and appropriate action plans;
- d) Integrated monitoring and review programme which will promote practice management by predicting potential damage to the site and will assess the effectiveness of management actions in tackling the problems.
- e) Description and assessment of the natural and cultural values of the site including the current state, and any protection / restoration / maintenance work required;
- f) Assessment of visitor potential (addressing issues of accessibility, safety and associated infrastructure and other visitor service requirements).

Outputs

The Outputs to be delivered in Phase One are:

- 1. National Heritage Site Roadmap
- 2. Heritage Site Management Framework

Phase Two: Individual Heritage Site Development and Implementation Plans

Each individual Heritage Site Development Plan will need to include the following three components (following the methodology outlined in the Technical Proposal for Consultant Services submitted by the Contractor, 30 June 2011):

- 1. **Development Plan:** A short overview of each site and its physical, social and cultural setting and the development challenges and options;

outlines conservation requirements;

outlines public access, public safety and mitigating the physical damage to monuments by the impact of visitor pressure;

outlines transportation issues, including requirements for traffic and parking management;

outlines options for ongoing management and maintenance of each site. This should include the consideration for forming a Working Party and project management assistance; and

outlines other implementation issues that will need to be addressed. This could include recommendations on on-going resourcing and expertise requirements for each site, including training requirements and ongoing monitoring and evaluation

- 2. **Financial Plan:** A detailed outline of a financial plan for site infrastructure improvements and other investments needed. The financial plan will need to provide a detailed budget for all the required physical site improvements and other investments needed, including minor infrastructure, signage and urgent safety work needed, as well as promotional material and support.;

3. **Implementation Plan.** An outline of how the development plan will be implemented, including responsibilities for project management and the delineation in roles and responsibilities with the Department of Conservation.

Outputs

The Outputs to be delivered in Phase Two are:

1. Development Plan
2. Financial Plan
3. Implementation Plan

Phase Three: Implementation and Management of the Individual Heritage Site Management and Development Plans

Following agreement by the PMC, the Consultant/s will oversee the implementation and project management of the plans; using the methodology outlined in the Technical Proposal for Consultant Services submitted by the Contractor, 30 June 2011.

PROCESS

The Contractor/s will report to and liaise with the CEO and the Tourism Advisor of the MoT.

A contract for service will be formed between the MoT and the Contractor/s.

TIME FRAMES

The assignment will require an input of approximately 60 days from the tourism consultancy with experience development of tourism standards and knowledgeable of the tourism sector in the Pacific.

Response to the RFP – Signing Contract	Day 1
Draft National Roadmap	Day 50
Final National Roadmap	Day 60
<i>(if approved by PMC to proceed):</i> Draft Individual Site Management Plans	Day 110
Final Individual Site Management Plans	Day 120
<i>(if approved by PMC to proceed):</i> Implementation Phase	Day 240

A brief project update report is to be delivered weekly, by 12pm each Friday until project completion.

The full report with recommendations including any legislative changes required will be delivered by 21 June 2013.

COSTS ESTIMATE – BUDGET

Respondents to the TOR / RFP are to provide a detailed budget for the total cost of this work, including disbursements and fee rates (Annex III)

Appendix 2. Team roles and expertise

Project Co-Leaders	Dr Jenny Cave Dr 'Ana Koloto	University of Waikato, New Zealand University of the South Pacific - Tonga
Team members	Mr Kevin Jones Dr Seu'ula Johansson-Fua Dr Masasso Paunga Professor Bruce Prideaux	Consulting Archaeologist University of the South Pacific – Tonga University of the South Pacific – Tonga James Cook University, Cairns, Australia

Descriptions of roles in the team and expertise			
Discipline	External	Local	Roles
Phase 1 National roadmap	Dr Cave Mr Jones Dr Cave Professor Prideaux	Dr Koloto Dr Johansson Fua Dr Pauanga	Co-leader Heritage plan Economics Tourism design Quality control
Phase 2 Individual site management plans	Dr Cave Mr Jones Dr Cave Professor Prideaux	Dr Koloto Dr Johansson Fua	Co-leader Heritage plan Tourism design Quality control
Phase 3 Implementation of the individual site management plans	Dr Cave Mr Jones Dr Cave Professor Prideaux	Dr Koloto Dr Johansson Fua	Co-leader Heritage Tourism design Quality control

Dr Jenny Cave

As co-leader of the project her role is to plan, design, deliver and report on the technical requirements of the project. She has responsibility for the tourism and attractions development and operational planning. In cooperation with the local team she will integrate the data collected and write the report. She will be involved throughout the project. She has been Senior Lecturer in Tourism and Hospitality Management at the University of Waikato since July 2004. Her countries of work experience include New Zealand, Canada, Australia and Barbados, spanning senior management and project consultancy roles in museums, libraries, science centre, and community art gallery and heritage buildings. Dr Cave was a Cultural Tourism Consultant with Arrow International Ltd and key assignment tasks were Pacific Island Business and Cultural Centre Feasibility Study

and Architectural Concept as well as the Maori Culture and Heritage Centre Tauranga. She has also worked with Tongan communities in New Zealand to plan cultural/heritage tourism enterprises.

Dr 'Ana Hau'alofo'ia Koloto

Her role is to co-lead the project in terms of the Tonga-side planning, observance of cultural protocols and to provide input into the analysis in Phases One, Two and Three. She is Campus Director of the University of the South Pacific since January 2009. She was Co-Director and Principal Researcher for Koloto & Associates Ltd., Auckland, New Zealand until 2002. At the University of Auckland, she became a Senior Lecturer/ Senior Fellow Woolf Fisher Research. In 2010-2011 she was a consultant for Cultural Mapping Planning and Policy Project and with Tonga Police as a Co-principal researcher in 2009. She undertook the consultancy job for AusAid in Tonga Drivers of Change Study in 2008. She has expertise in social dynamics, education, community liaison and cultural knowledge.

Mr Kevin Jones

In Phase One, his role is to develop the site assessment tools, brief and train local team members and with Dr Cave, undertake the site assessments. He will also play key roles in the implementation in Phases Two and Three. Kevin is a consultant attached to the University of Waikato's Institute of Business Research. He is an archaeologist and expert in world heritage site assessment and mapping and has worked extensively in New Zealand and the Pacific. His role is also to ensure that the assessments meet world best practice standards.

Dr Seu'ula Johansson-Fua

As team member Dr. Johansson Fua will contribute her expertise in community education, local knowledge and cultural knowledge as well as expertise in mapping Tonga's culture and heritage. She is Director of the Department of Education at the University of the South Pacific.

Dr Masasso Paunga

His role in the project is to facilitate governmental access to information and the observance of cultural protocols. Dr Paunga is the former Minister for Tourism and he is currently with the University of the South Pacific. His area of expertise is economics and finance and he is tasked to assess the Vava'u sites and management strategy.

Professor Bruce Prideaux

His role in the team is to provide advice on best practice in sustainable tourism and quality control. He is a member of Asia Pacific Tourism Association. He has been working throughout Australia, New Zealand and Norfolk Island. He has extensive experience in sustainable tourism development and the importance of the transportation sector; most recently in the rural sector and eco-tourism.

Appendix 3 Site Assessment Template

Tonga Heritage Site Template (revised Nov 21, 2011)	
BASIC DATA	
Site name (s)	
Supporting village name	
Location	
Lat and long	
Address and/or other location details	
Distance in km from supporting/nearest villages	
What is the site interest (brief highlights), should be sourced from cultural mapping data	
What makes the site unique?	
What makes the village unique	
Cultural constraints on visiting	
Wider setting of site	
Take a video of the site as approach from the road, as walk around and as leave	
Site description (brief)	
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	
Plan	
Key photo(s)	
Relationship to other sites (cultural and physical)	
EXISTING CONDITIONS	
Site condition	
Heritage features	
Vegetation cover	
Forest, open treeland, shrubland, grassland, paving, cultivation	
Structures on the site	
Conditions and uses	
Access routes to site	
Access to site (roads, foot track, within/adjacent to village, sea, beach)	
Current tourism	
Who comes	
Where from	
Why come	
When	
Current Income	
From tourism and other sources at the site	
Management issues	
Community aspirations	

Tonga Heritage Site Template (revised Nov 21, 2011)	
BASIC DATA	
Is area of site fully protected and surveyed?	
Is site fully within the reserve area	
What is tenure, reserve classification	
Does tenure suit protection and tourist visitation?	
Owners (live locally, elsewhere on island, overseas?)	
Other uses (graves, fruit gathering, grazing)	
Uses conflict with tourism?	
Restrictions on use (when, where, under what conditions)	
Fencing installed, if needed?	
Hazards	
Physical risks	
Climate / climate change risks	
Habitation Risks (farm stock, people living on /near the site, invasive species)	
Currently how reduced or mitigated?	
Ecological setting	
Causing damage to site	
Assists or impedes access	
Assists or impedes appreciation of site	
Any protected or high-value species, specimen or shelter trees?	
If problematic, how to fix?	
Tracks within site area	
State of tracks	
Layout and design adequate?	
Allow appreciation of site	
Safe	
Causing damage to site	
Need re-design?	
Other infrastructure	
Perhaps in supporting village, how far (km), condition?	
Shelter	
Toilets	
Assembly and orientation areas	
Signs and sign adequacy	
Attractions	
Accommodation	
Amenities (toilets)	
Activities (on or near the site, eg. Festivals)	

Tonga Heritage Site Template (revised Nov 21, 2011)	
BASIC DATA	
Carrying capacity	
Current usage (visitor no.s per day, per annum)	
Capacity with current infrastructure	
Free visits / guided / admission	
Group sizes and frequency of visitation	
Visitors' perceptions of crowding	
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	
Potentials	
Community support potential	
Income potentials	
Other (government, NGO, etc)	
Improve tenure, reserve classification	
Improve fencing, if needed?	
Hazards, how to be reduced or mitigated?	
Ecological setting	
How to prevent damage to site	
Assist access, e.g. clearance of understorey	
Vegetation and ecological management (understand and work with the ecology!)	
Tracks	
Layout and design	
Allow appreciation of site	
Safety	
Prevent damage to site	
Re-design needed?	
Other infrastructure (access, activities, accommodation, attractions, amenities)	
Roads	
Shelter	
Toilets	
Jetties/wharf/haul-out areas	
Assembly and orientation areas	
Signs and sign adequacy	
Pamphlets or other interpretation literature	
Visitor satisfaction surveys	
Training of guides	
<i>See also</i> Excel spreadsheet for existing and future costs	
<i>See also</i> Word details from community meetings:	
1. What is being done at the sites now	
2. What is hoped for in the future	
3. Issues (positives and negatives) for long term community maintenance and management for the sites	

Appendix 4. Description of pre-selected sites (Current)

Selection criteria Name	Significance <ul style="list-style-type: none"> - Uniqueness - Importance to Tonga 	Current tourism <ul style="list-style-type: none"> - Visitors & operators - Infrastructure 	Operational issues <ul style="list-style-type: none"> - Preservation - Management 	Current stakeholders <ul style="list-style-type: none"> - Cultural community - Village organisations - Government
Ha'amonga, Tongatapu Island	<ul style="list-style-type: none"> - Monumental architecture, unique in the Pacific, well recorded and mapped - Trilithon, Makafakinanga, 'Sight lines of the watch'. Langi. House platforms. - Ancient residence with links to Lapaha and ancient city, Mu'a 	<ul style="list-style-type: none"> - International, Tongan domestic tourists, VFR and locals. View structures. Learn heritage. - Tour operators, market stalls - Toilets, shelter, fenced. - Highly photogenic 	<ul style="list-style-type: none"> - Protection from overuse - Grass cut, but vegetation on house platforms not cleared. - Needs interpretive signage - Carparking, trails and visitor experience need planning and improvements 	<ul style="list-style-type: none"> - Niutoua village market stalls - Ministry of Tourism manages site maintenance through Town Officer - Marketed by Ministry of Tourism - Reserve land, Lands & Survey
Ene'io Beach Walkway and Lookout, Vava'u Island	<ul style="list-style-type: none"> - Natural attraction. Botanical gardens (Tongan/exotics), food processing and packaging, restaurant, visitor centre and picnic area. Safe swimming beach. - Ancient coral block quarry. - Walkway to a local lookout and birdwatching activity. 	<ul style="list-style-type: none"> - Mostly local, some international visitors. Sightsee, swim and picnic. - Multifaceted attraction, cultural show, restaurant, visitor attraction, packaging factory. Toilets. - Highly scenic natural attraction. 	<ul style="list-style-type: none"> - Unsafe cliffs - Location of best Matamahina viewing points needs to be established, whether it is at 'Ene'io or the Matamahina (see maps. 	<ul style="list-style-type: none"> - Village employees - Leased government land - Owner/operator commercial enterprise - Marketed by Ministry of Tourism and operator - Reserve land, Lands & Survey
Hufangalupe, Tongatapu Island	<ul style="list-style-type: none"> - Scenic. Natural rock archway, cliffs and sea caves. Bird and marine fauna. - Place of refuge for injured birds (lupe). Links to Maui - Long history of fishing from the cliffs and recreational use. 	<ul style="list-style-type: none"> - International, Tongan domestic visitors. VFR. View birds (lupe) and sightseeing - Dangerous cliffs, but safe swimming beach - Picnicing. - Former rubbish dump being cleaned up. - Tour operators - No infrastructure 	<ul style="list-style-type: none"> - Dangerous, actively eroding cliff edge. - High winds - Past loss of human life - Geological and safety assessments needed - Carparking and other infrastructure need to be planned 	<ul style="list-style-type: none"> - Weekly Vaini Village clean ups - Lord Ma'afu and MP leading site development - Marketed by Ministry of Tourism

Appendix 4 Contd.				
Selection criteria	Significance	Current tourism	Operational issues	Current stakeholders
Name	<ul style="list-style-type: none"> - Uniqueness - Importance to Tonga 	<ul style="list-style-type: none"> - Visitors & operators - Infrastructure 	<ul style="list-style-type: none"> - Preservation - Management 	<ul style="list-style-type: none"> - Cultural community - Village organisations - Government
Lia'anga huo a Maui, 'Eua Island.	<ul style="list-style-type: none"> - Li'angahuo a Maui - a natural rock archway. Cultural associations with the legendary hero, Maui. 	<ul style="list-style-type: none"> - Small numbers of guided international visitors. Local visitors to view scenery - Tour operators - NZ Aid road to site - Panoramic views of eastern ocean. Highly scenic. 	<ul style="list-style-type: none"> - Platform and cliff edges need engineering survey - Car parking, trails and interpretation signs need planning 	<ul style="list-style-type: none"> - Local tour operators - NZ Aid funded lookout at Lia'anga huo a Maui - National Park, Lands & Survey - Family horticulture eco-tourism at entrance gate
Lau'au Lookout & Fortress, 'Eua Island.	<ul style="list-style-type: none"> - Natural and heritage attraction. Cliff top viewing platform at fortified heritage site, mature rainforest. - Fortified site identified during survey. May link to Kaufana and King King Tupou I's defeat of Velata. 	<ul style="list-style-type: none"> - Small numbers of guided and self-guided international visitors. Locals. - Birds and rainforest - Panoramic views - Tour operators - Access controlled by Tonga Forest Products Ltd. 	<ul style="list-style-type: none"> - Lookout platform bolts removed, needs engineering survey. - Fortified ditch and bank being eroded by use. - Access improvements and maps needed - Fort needs conservation plan 	<ul style="list-style-type: none"> - 'Eua Eco-tourism Association clears vegetation at the lookouts - Tonga Forest Products Ltd maintains forestry roads and manage - NZ MFAT funded lookout installations(Lau'au and Lokupo) - National Park, Lands & Survey
Velata Fort, Lifuka Island, Ha'apai	<ul style="list-style-type: none"> - Fortified heritage attraction. Located near Pangai township, Ha'apai - Highly significant to Tongan history linked to the ascendancy of the modern Tupou Kingship lineage 	<ul style="list-style-type: none"> - Small numbers of guided, self-guided international visitors. Locals. - Plaque with plinth and interpretive signage. Off-road parking area. 	<ul style="list-style-type: none"> - Off road parking well maintained. - Pathways and heritage features obscured by vegetation, needs further review and maintenance. - Need to be preserved from animal damage - Conservation plan - Review land tenure 	<ul style="list-style-type: none"> - Ha'apai Tourism Association maintains the orientation area and parking - Marketed by Ministry of Tourism - Two landowners
Lakufa'anga, 'Eua Island.	<ul style="list-style-type: none"> - Rare rock formations. Lakufa'anga has important cultural associations and rituals (legend of family and turtle spirits) 	<ul style="list-style-type: none"> - Small numbers of guided international visitors. Local visitors to view turtles, birds and scenery - Tour operators - NZ MFAT road to site - Panoramic views of eastern ocean. Highly scenic. 	<ul style="list-style-type: none"> - Dangerous, actively eroding cliff edge. High winds. - Past loss of human life - Platform and cliff edges need engineering survey 	<ul style="list-style-type: none"> - Local tour operators - Close to NZ Aid funded lookout at Lia'anga huo a Maui - National Park, Lands & Survey - Family horticulture eco-tourism at entrance gate

Appendix 4 Contd.				
Selection criteria	Significance	Current tourism	Operational issues	Current stakeholders
Name	<ul style="list-style-type: none"> - Uniqueness - Importance to Tonga 	<ul style="list-style-type: none"> - Visitors & operators - Infrastructure 	<ul style="list-style-type: none"> - Preservation - Management 	<ul style="list-style-type: none"> - Cultural community - Village organisations - Government
Feletoa Fort, Vava'u Island, Vava'u	<ul style="list-style-type: none"> - Fortified heritage attraction - Monuments. Fortifications, several langi, water well, prison tree, 'road of death'. - Last independent fort (under 'Ulukalala) before re-unification of Tonga under the Tupou dynasty. 	<ul style="list-style-type: none"> - Very small numbers of unguided local visitors - View heritage features. - No tourism infrastructure - One sign 	<ul style="list-style-type: none"> - Heritage features obscured by vegetation. - Features need to be preserved from animal, human residential and horticultural activity - Needs conservation plan - Land tenure should be reviewed 	<ul style="list-style-type: none"> - No stakeholder investment to date - One landowner
Matamahina, Vava'u Island	<ul style="list-style-type: none"> - Adjacent to 'Ene'io Beach botanical gardens - Informal road along boundary of 'Ene'io Botanical Gardens - to tax allotments leads to a local informal lookout on the coast - Ritual of Matamahina 'observing the moon' viewing areas. High cultural importance. 	<ul style="list-style-type: none"> - Mostly local, - Highly scenic natural attraction. 	<ul style="list-style-type: none"> - Unsafe cliffs - Location of best Matamahina viewing points needs to be established 	<ul style="list-style-type: none"> - Reserve land, Lands & Survey
Uoleva Island, Ha'apai	<ul style="list-style-type: none"> - Several heritage sia heu lupe (pigeon-netting mounds) - Highly significant heritage attractions - Link to the royal and noble Uiha Island lineages - GIS location of all sia heu lupe needs to be established 	<ul style="list-style-type: none"> - Very small numbers of guided international visitors. Locals. - View heritage features. - No infrastructure except the resorts elsewhere on the island - Highly aesthetic structures 	<ul style="list-style-type: none"> - Heritage features obscured by vegetation. - Tracks unmarked - Access to and accommodation on island needs improvements - Stone-lined sand mounds, some very fragile. Could not be used for tourism. - Need conservation plan - Need protection from animal and horticultural activity - Review land tenure 	<ul style="list-style-type: none"> - No stakeholder investment to date - Landowners unknown to date

Appendix 5 Checklists for pre-selected sites

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui	
BASIC DATA	See Figures 6 & 7, Volume I
Site name (s)	Ha'amonga a Maui
Supporting village name	Niutoua
Location	
Latitude and longitude	21 ⁰ 08'12"S 175 ⁰ 02'53"W (locates the Ha'amonga a Maui 'gateway')
Address and/or other location details	North of Taufa'ahau Road
Distance in km from supporting/nearest villages	500 m west of Niutoua.
What is the site interest	<p>The Ha'amonga a Maui site is unique in Oceania for its monumental architecture and in Tonga for its importance in the dynasty history of the monarchy.</p> <p>The site was the palace area of the 11th Tu'i Tonga. The Makafakinanga (stone backrest of the King) and the Ha'amonga (gateway) are the biggest attractions in Tonga. The local area is known as Heketa.</p> <p>Ancient technologies that placed huge stones on an arch like this are remarkable. The stones are said to have been brought to Tonga from Wallis and Futuna, 1000s of km away, indicating skillful seafaring.</p>
What makes the site unique?	<p>Traditions say that the Ha'amonga area was the palace of the 11th Tu'i Tonga, established in AD 1100-1200 by King Tuitanga, King Tuitanga was a giant-sized and very fierce person who hit and broke the knees of his enemies with a long stick while he sat against the Makafakinanga.</p> <p>The Uasi la'aa ('watch') on the Ha'amonga (trilithon), was discovered by His Majesty the late King Tupou IV in his researches. It was used to measure time of the year by sightlines to the horizon. Three pathways radiate to the west of the Ha'amonga a Maui to mark the sun's rising position. The left hand path is used to observe the sun rise on the shortest day (21st June). The longest day is observed on the 21st December using the right hand sight line.</p>
What makes the Village unique	<p>The area is called Hopuanga o e la'a, the land of the sunrise. Niutoua is known for :</p> <p><i>Vete</i> A seasonal fish that comes ashore only at Niutoua (Niutoua Village Community Meeting Notes, 2011). Traditions state that once the fish come to shore, the Tamale (chief) has to stay inside. If he does not then they don't come. You can collect the fish but can never sell. If you sell them then the fish no longer come (Makafeo Faiga'a, 2011).</p> <p><i>Tuitui 'a Tamale</i> The clearest and finest sand found at no other beach in Tonga or elsewhere in the Pacific</p> <p><i>Tukungakauta Beach,</i> The landing place of the 'lali' sticks used for the awakening of the Tu'I Tonga as part of the traditional entertainment early in the</p>

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui

	<p>morning. It is told that Tamale- care taker of the village could never had a sound sleep at night due to the “fakatakatofo” (awakening) traditions. He finally became fed-up with it and he commanded Mofitautau’u (a devil) to steal the beating sticks and throw them away so that he can enjoy his sleep...and so the story goes, etc)</p> <p><i>Vaitu’ulil</i> A well in which its water was the only source for the preparation of kava for the Taumafa Kava (Royal Kava ceremony). It said that you cannot see the water when bringing it up with the “hohoni” but can only tell from the filling sound on the “hohoni”(Niutoua Village Community Meeting Notes, 2011).</p>
Cultural constraints on visiting	None now. The area could well be tapu (sacred) but that tradition is not currently maintained. If developed, then the fact that this is a tapu area should be explained. Perhaps the community could think through the cultural practice of tapu and restrict access to the area on their own terms.
Wider setting of site	Coastal plain on the north-east coast of Tongatapu. Site area gives access to a low coastal cliff (2 m high).
Site description (brief)	
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	Slight slope down from road to the Makafakinanga (the chiefs` back rest). Slight rise through coral rubble surface to coastal margin. Site overall is 3 to 6m above sea level
Plan	See Figure 7, Volume I
Key photo(s)	See Figure 6, Volume I
Relationship to other sites (cultural and physical)	Seat of King Tu’i Tonga XI. The seat of the kingdom was removed to Mu’a in the reign of the 12th Tu’i Tonga in approximately 12 to 13th C. Ha'amonga is linked to Lapaha through the succession of the kingdoms. Site is 25 km by road from the main population of Nuku’alofa in the north of Tongatapu. The Ha’amonga is on the Tonga World Heritage tentative list as part of the wider Lapaha early Tongan Kingdoms site.
EXISTING CONDITIONS	
Site condition	
Heritage features	Ha'amonga (the trilithon) is 5m high x 4.2 m wide at the base. It still stands but with deep weathering of its coral slab surface. It is sited on a small earth platform with coral slab edging (mostly collapsed) so the appearance is of a small low mound with the trilithon on top.
Vegetation cover	
Forest, open treeland, shrubland, grassland, paving, cultivation	<p>The southern part of the site, nearest the road and including the Makafakinanga is open grassland or 3m tall shrubland. The grassland narrows to form an avenue about 10m wide, leading down to the Makafakinanga (Chief’s Seat). The avenue is flanked by 15 year old Sialamohe (She Oaks), about 6m tall which add amenity value to the park-like effect and management - framing the views to and from Makafakinanga to Ha'amonga. North of the backrest (120 m from the road) the reserve area is open treeland with mature coastal trees (list: Fo’ui, Ngatata, Masikoka (amedicinal tree), Manau, Lopata, Tavahi, <i>Acacia</i> sp., <i>Ti Cordyline</i>). This treeland covers a number of coral slab-lined paepae and the Langi Heketa (meaning sliding on rear end / hobbling away).</p> <p>There is a large and graceful mango by the Ha’amonga and a large <i>Acacia</i> sp. adjacent to the Makafakinanga (Chiefs Seat), both of which</p>

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui

	<p>are very useful amenity trees on the cleared grassland area of the site.</p> <p>East of the grassland around the Ha'amonga a Maui there is a large area extending for many hundreds of metres where the late King had cleared the Ha'amonga sightlines to the horizon for observation of the rise of the sun in the east.</p> <p>The shrubland here includes Tisaipale, Bula, Toa, Mulberry (provisional identification)</p>
Structures on the site	<p>There is a fence on the road boundary and on the western boundary of Plantation Road. There is an informal market shelter towards the western boundary of the grassland near the entrance. There is a small concrete block toilet screened from the road by the market stall. Plantation Road forms the western boundary, this is overgrown and little used.</p>
Condition and uses	<p>Fences and market stall shelter in poor repair. Toilet block sound but needs refurbishment. Some trees nearer the coast are being taken for firewood.</p>
Access routes to site	<p>Direct access from Taufua'ahau Road via small gate. Open grassed area around trilithon and grassed avenue to Makafakinanga (Chief's Backrest). Some tracks have been formed north of the Makafakinanga through an area extending to the coast with the paepae and Langi Heketa to the coast but it is overgrown and not obvious. Informal vehicle track from Plantation Road along edge of the coast needs to be closed off.</p>
Access to site (roads, foot track, within/adjacent to village, sea, beach)	<p>No car park on the site. Site is entered by foot or by car from the road with parking on the narrow verge of the road or within the grassed area of the reserve near the road. Car parking at the site is intrusive to views of the Trilithon.</p>
Current tourism	
Who comes	<p>Free and independent tourists (FIT) and small tour van operators. Armed forces visitors, visiting diplomats, schools, VFR. Locals.</p>
Where from	<p>Local people, domestic Tongan and foreign tourists.</p>
Why come	<p>This is the most famous field monument in all of Tonga and one of the better known in the Pacific region. It is a good site to relate the stories of the early Tongan Kingdom.</p>
When	<p>Peak of visitation is June to September; the low season is December to May. We estimate 80 a day in high season and 40 in low. Total visitor numbers: up to 20,000 per annum.</p>
Current Income (from tourism and other sources at the site)	<p>Not known. But four markets stall operators at time of visit.</p>
Management issues	
Community concerns	<p>The community meeting on 24.11.11 noted:</p> <ul style="list-style-type: none"> • Concerned by drastic decline in tourist numbers • Managed by the Ministry of Lands. • Roaming animals not controlled • Better public facilities such as toilets and shelter for craft vendors and customers (Ha'amonga a Maui Field Notes, 2011)
Is area of site fully protected and surveyed?	<p>Yes, the tax allotments were purchased by late King Tupou IV</p>
Is site fully within the reserve area	<p>As noted, the site consists of the Ha'amonga and the Makafakinanga (Chiefs backrest). Both are well within the reserve boundaries. North of them in the treeland area are the Langi Heketa, paepae and other archaeological features. A good number are in the reserve area but not</p>

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui

	all (Spenneman, 1987). The site lines to the east have been cut for many hundreds of metres.
What is tenure, reserve classification	Trilithon Historic Park Act 1972. The area consists of 7 former tax allotments, a total area of 19 hectares (Spennemann n.d. Fig 3). Protected under the Reserves Act 1976. See notes about recent letter from Chief Tamale to the Minister (below)
Does tenure suit protection and tourist visitation?	Yes
Owners	Local
Other uses (graves, fruit gathering, grazing)	Ancient grave Langi Heketa. Horse grazing. Fruit gathering, also medicinal leaves and 'spice' plant from the treeland area. Firewood gathering.
Uses conflict with tourism?	No
Restrictions on use (when, where, under what conditions)	No
Fencing installed, if needed?	Yes but in poor condition
Hazards	
Physical risks	Minimal, easy grade for walking throughout the site.
Climate / climate change risks	Low to medium (2 m sea level rise might swamp the lower part of the site area).
Habitation Risks (farm stock, people living on /near the site, invasive species)	Risk to school children, local residents and visitors from vehicular traffic and car parking on both sides of the road.
Currently how reduced or mitigated?	
Ecological setting	
Causing damage to site	Minimal damage to the key structures in the grassland areas. Treeland north of the Makafakinanga gives some protection from erosion and rain. Roots will have invaded some sites.
Assists or impedes access	Grassland assists viewers, other archaeological sites are under thick ground cover plant and not visible under normal conditions. They are currently visible from the clearance for archaeological recording by ANU team lead by Dr Geoff Clark.
Assists or impedes appreciation of site	Grassland is necessary for viewing of major field monument. Formerly cleared sight lines in the shrublands are now obscured by re-growth. The treeland warrants a full botanical survey and description.
Any protected or high-value species, specimen or shelter trees?	There is a large tree at each of the monuments which casts shade and is a useful amenity to the area.
If problematic, how to fix?	
Tracks within site area	Grassed site does not have formed track. Informal tracks beside the Makafakinanga run further between the 7 paepae and eventually lead to the coast
State of tracks	Vehicle and foot traffic have produced bare ground at entranceway where vendors have sales tables and depressions in the ground alongside the Ha'amonga, the Makafakinanga. Tracks are unformed and overgrown around Langi Heketa, the paepae and Ha'amonga sightlines. Archaeological team had cleared the lower tracks on the date of visit.
Layout and design adequate?	No. Adequate on grassed area, but not at the eastern, lower end of the site or along sightlines from the Ha'amonga
Allow appreciation of site	Ha'amonga and Makafakinanga can be seen but not the other features

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui	
Safe	Yes
Causing damage to site	Yes
Need re-design?	Yes
Other infrastructure Perhaps in supporting village, how far away (km), condition?	Churches, schools adjacent to the site.
Shelter	Wooden market stall hut in reasonable repair but thatching needs to be replaced. Recent corrugated iron veranda.
Toilets	Concrete block structure (male/female)
Assembly and orientation areas	No
Signs and sign adequacy	Place name sign on directional sign on road frontage. Sign at Ha'amonga (damaged) and at Makafakinanga (defaced). Sign for Langi Hekata no longer standing and in poor repair.
Attractions	Not close by
Accommodation	One guest house in adjacent village to the east (5 km?)
Amenities (restaurants, cafes, shopping)	Small village shop (1 km?) but no restaurant/café or shopping.
Activities (on or near the site, eg. Festivals)	School children singing across the road at time of visit are part of the cultural ambience. Income for performances could go to the school.
Carrying capacity	
Current usage (visitor no.s per day, per annum)	Estimate 20,000 visitors per year plus drive by viewers as well. Local cars / trucks drive onto the site.
Capacity with current infrastructure	Up to 20,000. Capacity: Low season, average of 2 cars parked at a time, 2 people per car. 20 mins on site (photo at Ha'amonga) = 3 cars per hour. From 11 to 2pm (3 hrs). 36 people per day - 200 days per year. High season 100 days. High season, average 5 cars at one time 2 people per car. 20 mins on site (photo at Ha'amonga) = 3 cars per hour. From 11 to 3pm (4 hrs). 120 per day. 7200 low season, 12000 in high season. Estimated total per annum 19,000.
Free visits / guided / admission fee	50% free, 50% guided
Group sizes and frequency of visitation	
Visitors' perceptions of crowding	Congested at roadside - shoulder and high seasons.
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Survey not needed, undertaken by Spenneman (1987). Archaeologists will have completed a new survey which was being undertaken at the time of writing (19/11/11)
Potentials	
Community aspirations	<p>Fa'ainga Malakai and Town Officer Tolu would like to see the sight lines for the 'watch' cleared for full interpretation of the Ha'amonga. Village market stall holders support improvements to the site. Community and TVB need to decide whether to develop tracks around the paepae and langi down to the coast.</p> <p>Clearing of sight lines to the east for observing the sunrise at different seasons. Provide shelter for market and customers. Market sales. There may be potential for gate income.</p> <p>The community meeting on 24.11.11 noted:</p> <ul style="list-style-type: none"> The Women's Group will be leading the project for Ha'amonga if it materializes. Youth Group is 100 percent supportive of the Women's Group to be leading. These make up the Community

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui

	<p>Council of Vaini. The council identifies and discusses development issues regarding the village in general. Members mostly implement what the general community decides at the local 'fono' (an open discussion for all the 16 years old plus males and females in the community which can only be called either by the District Officer or the Noble/Chief of the village).</p> <ul style="list-style-type: none"> • Authority on the Ha'amonga (which currently under the Ministry of Lands) is a major concern; plans existed for the development of the site but cannot be implemented because of no control or authority to prevent unwelcomed visitors (including roaming animals) • The idea of setting up various commercial establishments such as canteen, handicrafts are a priority • Public facilities such as toilets are also a high priority. • After observing the rough sketch produced by Kevin – they were agreeable to the basic idea of the walking trail. • Suggestions and discussions among the group to further provide information based on elder's knowledge of the village. • A growing enthusiasm to extend the project by themselves to other traditionally recognized sites in Niutoua and its vicinity to capture a more holistic understanding of the myths and historical account of the village (Niutoua Village Community Meeting Notes, 2011).
Income potentials	High visitor numbers could permit charging however, there would be consequences of a drop in visitor numbers. Must be some potential to achieve revenue from market stall, local food specialties, performance and tour guiding. A gate charge is possible but would reduce numbers and encourage drive-by since the monument is highly visible from the road frontage. A donation strong box should be investigated at the car park. Licensing of tour guiding and possibly market stalls. A levy on tour operators would be a way to generate revenue for site maintenance and management, but might not accrue to village level.
Other (government, NGO, etc)	
Future tourism potential	
Future site capacity (if improvements made)	
Improve tenure, reserve classification	The sight lines to the east appear not to be fully within the reserve area. Tamale the High Chief sent a message to the Minister of Lands to clarify the boundaries on the eastern side (Fa'ainga Malakai - a copy of the letter needs to be sought).
Improve fencing, if needed?	Fencing is needed for car control and access, and to keep out roaming pigs and grazing horses.
Hazards, how to be reduced or mitigated?	Hazards - traffic management. Getting on and off the road – an off road car park will remove road side risks. On road congestion at peak times, space for maximum of 5 vehicles to park along the road front
Ecological setting	
How to prevent damage to site	Form tracks. Prevent vehicle access and parking on the site.
Assist access, e.g. clearance of understorey	Yes, on sightlines and around paepae if decision made to include them on a walking track
Vegetation and ecological management (understand and work with the ecology!)	Retain existing grassland, shrubland and treeland. Clear tracks (see sketch). Add interpretative signs and/or train guides.
Tracks	

Appendix 5.1 - Tonga Heritage Site Checklist - Ha'amonga a Maui	
Layout and design	Track to the coast, around paepae and the langi. Others along sight lines which extend to the coast.
Allow appreciation of site	
Safety	
Prevent damage to site	
Re-design needed?	
Other infrastructure (access, activities, accommodation, attractions, amenities)	New car park is needed on the site- large enough for up to 3 buses and 20 cars. Either on the Plantation Road along an old sunken road or along Liku Road (see Figure 7, Volume I). There is not enough area on the current site for parking. Half hectare is needed and it needs to be visible from main road. Rubbish bins are needed.
Roads	Plantation Road might have to be improved and widened for parking and for car / bus access
Shelter	New shelter and orientation signs are needed. The market stall needs to be improved to protect vendors and customers from weather
Toilets	Refurbish and replace toilet pans
Jetties/wharf/haul-out areas	
Assembly and orientation areas	Yes. Place for selling of market products on rainy days. Pamphlet provision. The location of all facilities needs to be carefully thought through and care needs to be taken not to impact on the monuments.
Signs and sign adequacy	Need new interpretative signs and repairs to existing signs.
Pamphlets or other interpretation literature	Yes, needed
Visitor satisfaction surveys	Yes, needed
Training of guides	Yes, should be local people
<i>See also</i> Excel spread sheet for existing and future costs – Appendix 10.1	
What is being done at the sites now	
What is hoped for in the future	
Issues (positives and negatives) for long term community maintenance and management for the sites	

References:

- Ha'amonga a Maui Field Notes. (2011). On-site meeting, 13/11/11. *Makafeo Faiga'a, Talking Chief and President of Wesleyan Church, Town Officer Tolu, Mr S. Lolohea visited the site with Dr. J. Cave, Mr. K. Jones, Dr. A. Koloto and Dr. M. Paunga at 10.00am. Notes by K. Jones and J. Cave.*
- Makafeo Faiga'a (2011). [Makafeo Faiga'a, Talking Chief and President of Wesleyan Church, October 2011.].
- Niutoua Village Community Meeting Notes. (2011). Ha'amonga a Maui Site (Niutoua Village). Notes by Dr Masasso Paunga. University of the South Pacific. November 2011.
- Spenneman, D. H. (1987). The Development of the Ha'amonga Trilithon Historic Park: The Ha'amonga Historic trail. Report prepared for the Ministry of Natural Resources. Nuku'alofa, Tongatapu, Tonga: Government of Tonga.

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u

BASIC DATA	See Figures 8, 9, and 10, Volume I
Site name (s)	‘Ene’io Botanical Garden and the Matamahina
Supporting village name	Tu’anequivale
Location	
Lat and long	Latitude: 17 32.407 S Longitude: 149 34.247 W
Address and/or other location details	‘Ene’io Beach, Tu’anequivale, P.O.Box 3, Neiafu, Vava’u, Tonga. On SE coast of main island of Vava’u.
Distance in km from supporting/nearest villages	3
What is the site interest	Walkway from beach and ‘Ene’io Gardens to scenic lookout. Viewing of the Matamahina (moonrise)
What makes the site unique?	<p>A professionally run visitor attraction. Botanical gardens with many Tongan and exotic plants/species varieties (total some 600) formally established in 2006 with many plantings dating back to 1972.</p> <p>The neighbouring point (leased by EECL) appears to have been fortified and has a number of langi (graves) and notable views of the surf at the edge of the reef platform exposed to the SE trade winds. Several troughs for cut coral slabs at the beach.</p> <p>The project team identified that an area of high cultural importance was the Matamahina. Fungamatoto – Ko e ki’i fo’i laupapa maha he Tu’aliku ’oku fai’anga mata māhina talu mei ono’aho (Johansson Fua <i>et al.</i>, 2011). The Matamahina can be reputedly viewed from a vantage point east of the point adjacent to ‘Ene’io Beach.</p> <p>Interest in developing the Matamahina was generated by the Late King George V. to develop a walkway to a cliff top viewpoint from which the locals watch the moon rise (Pers comm. Dr. M. Paunga, Email, Feb 24, 2012).</p> <p>The matamahina (viewing of the moon) as it rises is the most beautiful sight that I have ever seen. It is spectacular and beautiful sight that people are not allowed to talk or make any noises, or smoke (Vava’u Community Meeting #1, 2012).</p> <p>For longer nights (po loloa), the viewing of the rising moon is done from Matoto (in Tu’anequivale) and for shorter nights (po nonou), the viewing is done from the village of Ha’alaufuli (where the District Officer is from) (Vava’u Community Meeting #1, 2012).</p> <p>“Mata Mahina Hopoanga – place of seeing the Moonrise” on the peninsula of Matoto on the northern coast of Vava’u”. (p 560).</p> <p>“The place where we sit is called Mata Mahina Hopoanga, the place of seeing the moonrise. In the old days people would climb up here to watch the moon rise. The custom was that no one would speak or light a fire until the moon had cleared the horizon. They would sit here in silence, watching the sea to the east. When she first began to appear her light formed a shining path right to this point and people said she was swimming here” P408 (Crawford, 2011)</p>

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u

What makes the village unique	
Cultural constraints on visiting	None
Wider setting of site	
Site description (brief)	<p>Excerpt from EECL document: <i>‘Ene’io Enterprises Company Limited (EECL) is comprised of:-</i></p> <ul style="list-style-type: none"> • 22 acres of botanical garden • a beachside visitors centre with a bar, restaurant and gift shop • manufacturing ‘Ene’io Natural Foods • production of handicrafts as ‘Ene’io Creations • marine activities-rowing and snorkeling • consultancy work-national and regional <p><i>The main business of EECL is the botanical garden with over 500 plant cultivars and over 100 plant families. Planting started in 1972 as private hobby for:-</i></p> <ul style="list-style-type: none"> • conservation of our native flora • introduction of exotic and economically important species • a seed bank for biodiversity, and • educational purposes of Tongans and visitors alike. <p><i>Normally gardens are owned by governments and foundations and usually as free service to the public. Our main focus is therefore to make the garden as a viable business by charging tours including:-</i></p> <ol style="list-style-type: none"> 1. Polynesian Cultural Tour with Cultural Demonstrations 2. Walk With the Natives Tour 3. Bird Watching and Hiking Tour – new one to start in June 2011 <p><i>The visitor’s centre is set up with restaurant and bar and gift shop to cater for the needs of the visitor. The gift shop is set up to sell our ‘Ene’io Natural food products like spices, vanilla extracts, nonu juice, Tongan body oil, dried fruits, and chips. It is also to sell our ‘Ene’io Creations of crafts and arts.</i></p> <p>Keitali Nonu showed J. Cave the Matamahina viewing area. It was located at the end of an unformed road that begins at the formed road leading to ‘Ene’io Beach, follows the north border of ‘Ene’io Gardens, and then curves south east towards the coast. On 11/01/12 the road was impassable except by 4WD. We walked from the wet, muddy area up an easy slope through mixed forest, and then downhill to the steep viewing area, backed by with she-oaks trees. The 15 by 5m rectangular cliff top exposed ground area is not fenced and subject to scouring by water. The view out to sea and along the beach-lined coastal shelf towards the point that adjoins ‘Ene’io beach is spectacular. (See Figure 9, Volume I).</p>
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	A small point and beach front behind the reef platform (both leased by EECL) and a hinterland area of about 8 ha on a slight slope to the sea which is owned by EECL.
Plan	See Figure 9, Volume I
Key photo(s)	See Figure 8 and 9, Volume I
Relationship to other sites (cultural and physical)	Matamahina Point lies to the north-east of ‘Ene’io Beach and is an important cultural site. Area is near a whale migration and is on the traditional sea route to Samoa, Fiji.

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u

EXISTING CONDITIONS	
Site condition	
Heritage features	<ol style="list-style-type: none"> 1. Modern botanical gardens established in 1972. Actively planted, good tracks, plants well labelled, in about 12 groves or ‘esi, adjacent public road. 2. The coastal point is an area of about 4 ha of coral limestone undercut at sea level for the most part. The defensive ditch on neck leading to mainland is much eroded. The coral slabs of the sides of the langi are somewhat disturbed but the form is recognisable. 3. The Matamahina viewing area is a steep cliff top slope, rimmed by sheoak trees, that overlooks a beach and coral platform immediately east of the point (possibly Matoto) adjoining ‘Ene’io Beach.
Vegetation cover	Many trees and shrubs in the botanical garden. On the point is a low coastal forest with a fringe of faa (Pandanus) and she-oaks (Casuarina). Similar vegetation on the shelf overlooking the beach where Matamahina is supposed to be located.
Structures on the site	Owners’ house, processing plant and botanical gardens on the privately owned land. On the leased land are public toilets and a visitor centre both maintained by EECL. No structures at the Matamahina location.
Conditions and uses	Structures in good condition
Access routes to site	By public road (unsealed last 2 km), tracks in botanical gardens and a cleared route to the point. Informal road leaves public road, 1km to the coast.
Current tourism	
Who comes	Mostly in the whale watch season (May to August). Also cruise ships in the southern summer season.
Where from	Local Vava’u people and international tourists visit ‘Ene’io Beach. Only locals visit Matamahina.
Why come	Beach scenery and swimming. Moonrise viewing.
When	See above
Current Income	
From tourism and other sources at the site	Not sought but probably in the range T\$40-80,000 pa. None at the Matamahina.
Management issues	
Community aspirations	The Tu’anekevile village community supplies to ‘Ene’io Enterprises Company Limited (EECL) fruits for drying and other processing such as nonu, also bulk meat, vegetables and fruit for visiting tours. Villagers also do demonstrations.
Is area of site fully protected and surveyed?	Land area is in three parts: <ol style="list-style-type: none"> 1. Inland area owned by EECL 2. Coastal strip (bisected by road) runs about 30-40 m inland and includes the small point total area about 3 ha leased for 50 years from 2010 3. Informal road departs the public road, crosses private land to access allotments. Coastal viewing area may be Government Reserve (Figure 10, Volume I).
Is site fully within the reserve area	NA
What is tenure, reserve classification	Private land and coastal strip

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u

Does tenure suit protection and tourist visitation?	Yes, includes public access to beach with a charge for access to the toilets and use of the leased land.
Owners	EECL and leased land. Project is to improve walkways
Other uses	
Uses conflict with tourism?	No
Restrictions on use (when, where, under what conditions)	Guided through botanical gardens and also on bird watch tours to the point.
Fencing installed, if needed?	Yes. Point may need improved fencing
Hazards	
Physical risks	Slips and falls on uneven ground for older visitors. Low cliffs on the point adjoining ‘Ene io Beach undercut at sea level and sloping cliff top ground (subject to scouring) pose a risk of serious falls.
Climate / climate change risks	Sea level rise would affect the coastal strip at ‘Ene’io Beach. Increased storms will affect erosion at the Matamahina.
Habitation Risks	Lack of toilet facilities in the wider area away from the visitor centre
Currently how reduced or mitigated?	Visitors accompanied by proprietors for the most part. No measures in place at the Matamahina.
Ecological setting	
Causing damage to site	Unusual because of the botanical garden, other areas typical Tongan coastal forest with coconut, faa, etc. Owners perceive a risk of erosion and fine silt from surrounding country entering the sea on the reef platform and killing coral.
Assists or impedes access	NA
Assists or impedes appreciation of site	NA
Any protected or high-value species, specimen or shelter trees?	Many and great variety in botanical gardens. None likely in coastal strip.
If problematic, how to fix?	
Tracks within site area	
State of tracks	<ol style="list-style-type: none"> 1. Good within the botanical gardens part from a steep area with no track formation at the seaward end 2. Tracks poor on the point, for the most part they are routes cleared of vegetation with low temporary barriers at the cliffs. 3. Informal road to reputed Matamahina viewing area very wet and muddy. But easy gradient to walk.
Layout and design adequate?	
Allow appreciation of site	Yes
Safe	Not fully safe especially on the point. Matamahina viewing area very steep and subject to washout.
Causing damage to site	Route will be altered around the langi on the point.
Need re-design?	Some design needed on the point mainly for the barriers and for in-ground steps on the steeper parts. Road to viewing area need substantial improvement, barriers and viewing platform at coastal end.
Other infrastructure	
Shelter	Yes at ‘Ene’io Beach. None at Matamahina area.
Toilets	One only by the visitor centre

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u	
Assembly and orientation areas	Yes, at the visitor centre
Signs and sign adequacy	Good in botanical gardens, non-existent on the point or Matamahina viewing area.
Attractions	
Accommodation	No
Activities (on or near the site, eg. Festivals)	Polynesian crafts carried out in the course of tours
Carrying capacity	
Current usage (visitor nos per day, per annum)	2-4,000 pa
Capacity with current infrastructure	5-10,000 to the botanical gardens. Limited numbers to the point (500 pa).
Free visits / guided / admission	Mostly guided
Group sizes and frequency of visitation	Not known. Group sizes could be large with tours from cruise ships
Visitors’ perceptions of crowding	Low
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Not needed
Potentials	
Community support potential	High
Income potentials	Moderate
Other (government, NGO, etc)	The late King George V wanted a road to be built to ‘Ene’io (Vava’u Community Meeting #1, 2012)
Future tourism potential	
Future site capacity (if improvements made)	
Improve tenure, reserve classification	No, coastal strip will eventually revert to government if the lease is not renewed.
Improve fencing, if needed?	Fencing of the point against pigs is needed.
Hazards, how to be reduced or mitigated?	Better tracking and steps and handrails on the point and the Matamahina; Large storm drain needed at Matamahina. Also minor platforms and good handrails and barriers on the cliffs on the point. Minor in-ground steps and handrail needed in the botanical garden.
Ecological setting	
How to prevent damage to site	
Assist access, e.g. clearance of understorey	
Vegetation and ecological management	Some new planting will be warranted on the point and at the Matamahina viewing area. The botanical gardens are developing its own unique forest and shrubland ecology even although it is intensively managed.
Tracks	
Layout and design	
Allow appreciation of site	Good at present but cleared routes only on the point. Access to Matamahina is undeveloped.
Safety	Not very safe at present. The short section of steep descent in

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u

	<p>botanical gardens and the rise/descent to/from the point need in-ground steps and a hand rail to a good permanent standard. 60 m of steps and handrail is needed in total.</p> <p>Boardwalks or levelled tracks and solid handrails are needed on about 80 m of the track on the point. Similar measures needed at the Matamahina viewing area.</p>
Prevent damage to site	
Re-design needed?	Minor re-routing on the point.
Other infrastructure (access, activities, accommodation, attractions, amenities)	
Roads	<p>Yes. Ideally, pave the road from the main road in the village leading to both the beach/ Matamahina and also the botanical garden.</p> <p>Also pave the road that branches off to the Matamahina Beach.</p>
Shelter	No
Toilets and other	Yes, in botanical gardens and on the point. Also better (higher) water tank needed to service the visitor centre and existing public toilets. Need rubbish bins and collection at Matamahina viewing area since it is 1km from the formed road.
Jetties/wharf/haul-out areas	No
Assembly and orientation areas	No
Signs and sign adequacy	Needed for the point walkway and the Matamahina area. EECL is also seeking an additional 200 plant labels.
Pamphlets or other interpretation literature	Yes
Visitor satisfaction surveys	Yes
Training of guides	Not at present
See also Excel spreadsheet for existing and future costs	Appendices 10.2 and 10.8
What is being done at the sites now	
What is hoped for in the future	<p>Future costs:</p> <p>‘Ene’io Walkway</p> <ol style="list-style-type: none"> 1. Safety and in-ground steps handrails approx. 60 m horizontal NZ\$ 6-10,000 2. Platforms or formed path and good handrails at cliff edge approx. 40 m NZ\$ 25,000 3. Toilets x 2 NZ\$30,000 4. Laptop NZ\$ 2,000 5. Review of run-off issues, clean out and renew silt trap on stream NZ\$ 3,000 plus 6. Pave road from Village to ‘Ene’io Beach <p>Matamahina</p> <ol style="list-style-type: none"> 1. Safety and in-ground steps handrails approx. 60 m horizontal NZ\$ 6-10,000 2. Matamahina platforms or formed path and good handrails at cliff edge approx. 40 m NZ\$ 25,000 3. Rubbish bins \$2,000 4. Road development (gravel or crushed coral) \$20,000 at ‘Ene’io Beach 5. Pave the road that branches off to the Matamahina Beach

Appendix 5.2 – ‘Ene’io Botanical Garden and the Matamahina, Vava’u	
	<ol style="list-style-type: none"> 6. A shelter (palepale) for people to wait at before the moon rises - for longer nights at Matoto (in Tu’anekevile) and for shorter nights at the village of Ha’alaufuli 7. The place needs to be cleared and cleaned up, and a flower garden to be planned
Issues (positives and negatives) for long term community maintenance and management for the sites	Issues: who would maintain the Matamahina viewing area? Area is located beyond the land leased by the ‘Ene’io Gardens operator.

References

- Crawford, B. K. (2011). *Toki: The true story of William Mariner*. United States: The Crawford Press
- Johansson Fua, S., Tuita, T., Kanongata’a, S. L., & Fuko, K. (2011). *Cultural Mapping, Planning and Policy: Tonga*. Nuku’alofa, Tongatapu, Tonga: Secretariat of the Pacific Community on behalf of the Ministry of Education, Women’s Affairs and Culture, Government of Tonga.
- Vava’u Community Meeting #1. (2012). Vava’u Community Meeting #1. Held 11th January at the Governor’s Office, Neiafu, Vava’u.

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui

BASIC DATA	See Figures 11, 12, 13, and 14, Volume I
Site name (s)	Lakufa'anga and Li'angahuo a Maui
Supporting village name	Ha'atu'a on the NZ Aid southern road
Location	
Latitude and longitude	21 ⁰ 27'15.4"S 174 ⁰ 54'26" (Rock Garden and Fa trees)
Address and/or other location details	Far south-east corner of 'Eua Island
Distance in km from supporting/nearest villages	10 km
What is the site interest	
What makes the site unique?	<p>Impressive cliff and coastal scenery on an exposed coast with a wide range of bird and marine fauna.</p> <p>Lakufa'anga is the cliff-side edge of a natural coral limestone karst formation of fragmented and uplifted rock slabs, locally called the Rock Garden. This formation is slowly collapsing into the sea, undercut by waves and assisted by the shear-planes of the slabs. The site has a folklore tradition and custom relating to the throwing of fa'a (Pandanus) fruit into the sea from the cliffs, see http://www.eua-island-tonga.com/Lakufaanga.html .</p> <p>The story of the Lakafa'anga is a sad one. There was a couple that lived in the area with their children. One day their son fell from the cliff into the ocean. In their mourning for the loss of their son the parent would go to the end of the cliff to look out for their son. They would pick the Fa fruits (the Fa fruits have fragrance and Tongans use Fa for making lei for social functions, including funerals) and throw (laku) them into the ocean, in the hope that their son would come back. In her grief, the mother decided to jump into the ocean to be with her son. She was followed by her husband and the rest of the family. The people of 'Eua would continue to pick the Fa fruits and throw them into the ocean in respect of this family. Turtles would appear and come close to the rocks. These turtles are the family members. A white line of seaspray (weave) would often appear from the rocks to the ocean and this is known as the family's pathway as they return to the ocean. The name Lakufa'anga originated from this story. Laku means to throw. Fa refers to the Fa trees that are found in this area. 'Anga means place from which something is done. Lakufa 'anga literally means the place from which the Fa are thrown ('Eua Community Meeting, 2012).</p> <p>Li'angahuo a Maui (Maui's Archway) is a collapsed sea cave and natural bridge. It is the largest in Tonga. It too has folklore tradition see http://www.eua-island-tonga.com/LiangaHuoAMaui.html</p> <p>There is a link between Maui's Archway and Matalaanga a Maui. Matalaanga a Maui is located close to the Peito (kitchen – a place for and where food is stored) [Note: 'Eua used to be known as the Peito of Tonga, because they produced a lot of food and take them to Tongatapu]. Maui and his mother lived in 'Eua. One day Maui took his huo (spade – a very strong stick) and began dig (langa). As he dug the holes it shook the land so much that his mother told him to stop it. Maui then threw his huo (spade) and it landed in Li'angahuo 'a Maui. Li'angahuo literally means the place where Maui's huo landed ('Eua Community Meeting, 2012).</p>

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui

What makes the village unique	Ha'atu'a is physically the closest village, but does not have a specific cultural association with these sites which are significant to the island as a whole.
Cultural constraints on visiting	None
Wider setting of site	The two sites, Lakufa'anga and Li'angahuo a Maui are impressive natural attractions, located on the south-eastern corner of the island of 'Eua. Although named as distinct locations, they are in fact separated by several hundred metres but both are accessed by a single road access.
Site description	
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	Older coastal marine terraces of coral limestone karst raised some 30m above sea level. The main site area of Lakufa'anga and Li'angahuo a Maui encompasses about 15ha (hectares) and is about one km long. It is a former beach; bordered by a line of old coastal limestone stacks raised about 30m asl. To the west is the main north-south axial ridge of 'Eua rising to about 80m asl.
Plan	See Figure 14, Volume I
Key photo(s)	See Figures 11, 12, and 13, Volume I
Relationship to other sites (cultural and physical)	
EXISTING CONDITIONS	
Site condition	Lakufa'anga is an actively eroding cliff edge with sheer drop to the narrow coral platform and open seas. Li'angahuo a Maui appears stable but is also coral limestone. This was assessed from the lookout, 500m distant.
Heritage features	The heritage features are associations only, although there is a struggling line of faa on the Rock Garden (old coastal stacks) and on the cliff edge.
Vegetation cover	The main Lakufa'anga area is in grassland grazed by about 20 horses. There are many Acacia seedlings in the grass which would readily become a shrub and treeland cover if grazing stops. To the north, in the area of Li'angahuo a Maui, there is a coastal forest of cycads (longolongo), tree ferns (punga), toa (Casuarina) faa (Pandanus), si (Cordyline) and small trees such as guava and hipao (paper mulberry, Broussonetia)). The forest is grazed and trodden underneath by horses, mainly near the open grassland. The young faa is also grazed by the horses.
Structures on the site	There is a fence at the southern end of the site area and a Taranaki gate (post and wire) at the end of the NZ Aid road. The uprights for a sign to identify the Lakufa'anga site can still be seen, but the sign has blown away. The road within the area is an informal 4WD track multi-routed and poorly drained in places. There is no other structure at the site. To the north of Lakufa'anga the track crosses the natural bridge of the Li'angahuo a Maui and gives access to properties to the north. The main built structure at Li'angahuo a Maui is a c.2006 engineered platform (built by NZ Aid) which is reached by a route from the 4WD

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui

	track marked with ribbon ties. The platform overlooks the sea cave and natural arch to the east from an altitude of about 70 m above sea level.
Condition and uses	The Li'angahuo a Maui platform has no sign indicating loading restrictions and has severely rusted galvanised bolts throughout. The angle irons connecting the joists to the counterweight are also severely rusted. The timber is in good condition throughout.
Access routes to site	
Access to site	The site is easily accessed within the area by foot over the grassed area, although the weathered coral underneath is rough in places. The platform above Li'angahuo a Maui is reached by a marked route up and across a slope in the open forest floor.
Current tourism	
Who comes	Tour operators from the guest houses who bring a small number of international tourists Tongan domestic tourist and 'Euan visiting friends and relatives
Where from	New Zealand, Australia, USA, Tonga
Why come	Scenery, wildlife and folklore
When	Main tourist season, May-September
Current Income (from tourism and other sources at the site)	No direct income to site, but income to tour operators and to the couple at the gate entrance who offer small-scale farm tours, on arrangement.
Management issues	
Is area of site fully protected and surveyed?	Area appears to be in a buffer zone for the national park to the north. It is noted as government leased land (for grazing?) land (Bellingham & Fitzgerald, 1997)
Is site fully within the reserve area	Yes
What is tenure, reserve classification	National park leased land (Bellingham & Fitzgerald, 1997)
Does tenure suit protection and tourist visitation?	Yes, grazing is essential to maintain the open coastal views
Owners (live locally, elsewhere on island, overseas?)	NA
Other uses (graves, fruit gathering, grazing)	Used for 4WD and horse access to properties to the north over the natural bridge
Uses conflict with tourism?	No
Restrictions on use (when, where, under what conditions)	No
Fencing installed, if needed?	Poor quality fencing and gate on the south-western boundary at the end of the NZ Aid road. Other minor fences noted in forest area
Hazards	
Physical risks	Fatal falls from the cliff at Lakufa'anga have occurred. Risk of stumbles for visitors in grassland and on forest floor en route to Li'angahuo a Maui
Climate / climate change risks	No
Habitation Risks (farm stock, people living on /near the site, invasive	Horses are in low numbers and do not yet appear to be a problem.

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui	
species)	
Currently how reduced or mitigated?	Cliff edge safety is secured by guided visits but otherwise no safety signs or barriers are in place
Ecological setting	
Causing damage to site	No
Assists or impedes access	No
Assists or impedes appreciation of site	Grassland essential to the coastal views and to views of the rock garden
Any protected or high-value species, specimen or shelter trees?	No
If problematic, how to fix?	
Tracks within site area	
State of tracks	NA
Layout and design adequate?	Informal only
Allow appreciation of site	Yes
Safe	Risk of stumbles and falling
Causing damage to site	No
Need re-design?	Yes. Signage, formed pathways and a fenced viewing platform would decrease physical risks.
Other infrastructure Perhaps in supporting village, how far (km), condition?	
Shelter	None
Toilets	None
Assembly and orientation areas	None
Signs and sign adequacy	None
Attractions	The entire area is very scenic
Accommodation	In villages and guesthouses
Amenities (toilets)	None
Activities (on or near the site, eg. Festivals)	Some ritual activities still carried out at Lakufa'anga. Throwing the Fa, singing of associated songs.
Carrying capacity	
Current usage (visitor no.s per day, per annum)	1,000 pa
Capacity with current infrastructure	2,000 pa
Free visits / guided / admission	Free and guided tours, but no admission at the sites
Group sizes and frequency of visitation	Small tour and VFR groups (perhaps 4 to 8, in one or two cars)
Visitors' perceptions of crowding	Nil
FUTURE MANAGEMENT OPTIONS	

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui

Improve protection and survey	Yes, it is unclear what status of lease is and the grazing rights
Potentials	
Community support potential	High
Income potentials	Moderate, guided groups essential because of safety concerns.
Other (government, NGO, etc)	
Future tourism potential	
Future site capacity (if improvements made)	
Improve tenure, reserve classification	Yes see note above, the area should be in the national park, not designated as a buffer zone
Improve fencing, if needed?	South-western fence could be improved and gate should be improved
Hazards, how to be reduced or mitigated?	Cliff warning signs needed as part of orientation to the area. Platforms with barriers needed in geologically stable parts of the cliff edge. Survey needed of cliff edge by geotechnical engineer. Replace rusted bolts and angle irons with stainless steel throughout the lookout structure.
Ecological setting	
How to prevent damage to site	Plant more Fa trees closer to the cliff that overlooks the sea turtles. The tradition of throwing the Fa means that the flowers and fruit are picked by visitors and thrown into the sea, accompanied by the song / prayer. Higher visitor numbers and interpretation information would encourage this behaviour.
Assist access, e.g. clearance of understorey	
Vegetation and ecological management	Grassland can be maintained by continued grazing. Horses are probably stripping forest under storey but this may be acceptable in a buffer zone for the park. Forest edge could be fenced if grazing is to be continued. If grazing ceases the grassland will revert to an Acacia forest within 20 years.
Tracks	
Layout and design	
Allow appreciation of site	Gate at entrance. A new walkway of good standard could be made through the grassland area and if so, should include safe viewing points for the sea and cliff areas. Perhaps design to provide view to the seas below since viewing of the turtles is a key element of the Lakufa'anga. Improved track access. New bolts needed for Li'angahuo a Maui lookout platform to ensure is safe.
Safety	See above
Prevent damage to site	If the 4WD route is to be used, some drainage and gravel may be warranted to prevent churning of soil and multiple routes. The 4WD track should be separate from any foot track.
Re-design needed?	Yes

Appendix 5.3 - Lakufa'anga and Li'angahuo a Maui

Other infrastructure (access, activities, accommodation, attractions, amenities)	
Roads	No
Shelter	Yes, for shelter and orientation signs, perhaps near the gate or the Rock Garden
Toilets	No
Jetties/wharf/haul-out areas	No
Assembly and orientation areas	Yes, see above
Signs and sign adequacy	Orientation, safety and traditional folklore information is needed
Pamphlets or other interpretation literature	Yes
Visitor satisfaction surveys	Yes
Training of guides	
<i>See also</i> Excel spread sheet for existing and future costs Appendix 10.3	
What is being done at the sites now	Low use at present. Small groups, guided tours or freedom walking backpacker trekkers.
What is hoped for in the future	<ul style="list-style-type: none"> • Consult with elders for accurate information about the history of the sites. • 'Eua Eco-tourism Association willing to ensure that the bolts are replaced. • Want a platform for the Lakufa'anga. • Set up a committee to do research on the sites. • District Officer call meetings at each village to inform about the safety/bolt removal problem at the platforms • Ha'aluma Beach has high usage but Lakufa'anga is inaccessible • Development of historical sites will bring visitors, stay in local accommodation, use tour operators who buy food, other goods and services from 'Eua, employ local people • Work with the youth to record the actions songs from the Lakufa'anga. Send to elders from 'Eua in other parts of the world. Promote in the youth of 'Eua a sense of valuing things 'Eua (eg. Matanga). Record the significant cultural and historical sites. Keep for the people of 'Eua around the world ('Eua Community Meeting, 2012).
Issues (positives and negatives) for long term community maintenance and management for the sites	<ul style="list-style-type: none"> • Need a budget from the Ministry of Tourism for this work and then the Council will organize and pay various groups such as the women's groups, youth groups and other community groups to do the maintenance work. • 'Eua people want to be part of the decisions to select, and to develop. This is a project for all of 'Eua to do. • Concern that there will not be concrete outcomes for 'Eua from the consultants' visit ('Eua Community Meeting, 2012).

References

- 'Eua Community Meeting. (2012). 'Eua Community Meeting. Held 10th January at Molipeli Conference Room, Ministry of Agriculture, 'Onohua, 'Eua Island.
- Bellingham, P., & Fitzgerald, G. (1997). *Management Plan for 'Eua National Park, Kingdom of Tonga*. Lincoln, New Zealand: Landcare Research for the New Zealand Ministry of Foreign Affairs and Trade.

Appendix 5.4 - Lauua Lookout, 'Eua Island	
BASIC DATA	See Figures 15, 16, and 17, Volume I
Site name (s)	Lauua Lookout and Fortress, see Figures 15, 16 and 17, Volume I
Supporting village name	Nearest village Ha'atu'a (not supporting)
Location	
Lat and long	
Address and/or other location details	In National Park adjacent to Tonga Forest Products managed forest farm area. Access is from Telephone Road past Tania's Guest House. Site area is on prominent escarpment overlooking the eastern coast of 'Eua. Located approximately 500m south of the Ana Kuma (Rat Cave) which is ca. 20m north of the Lokupo Lookout (Millar & Smith, 2002) page 10.
Distance in km from supporting/nearest villages	4 km
What is the site interest	<p>Spectacular views from a built wooden platform lookout (NZ Aid) on a naturally formed outcrop on coastal cliff. The 'fortress' is an archaeological feature which encloses the cliff including the site of the platform edge and is semi-circular or oval in plan.</p> <p>The cliff edge is in a well- developed Tongan rainforest and overlooks coastal terraces. Allows for sighting of Tongan wildlife such as red-fronted parrot flying in the canopy below as well as in the mature forest that covers the fortress and its approaches. Excellent views of the fragmented coral coastal strip that attaches to the island.</p>
What makes the site unique?	<p>The site appears to be associated with stories of the history and development of the current Tongan monarchy and wars of the early 19th C. At the 'Eua community meeting on 10/1/12 a woman identified the site as Onematu, possibly a place where armaments were stockpiled by Kaufana who obtained this by wrecking ships and other means. The same name appears on Ha'apai at a specific location in Pangai. The armaments reputedly were obtained at 'Eua from Kaufana by Taufu'ahau of Vava'u to fight Laufilitonga (the Tu'i Tonga of Tongatapu). Historical and archaeological research is needed to verify the story.</p> <p>The place was called 'Onemato. There was a warrior and hero from 'Eua called Kaufana. He used to capture foreign ships and collected their guns, gunpowder/ammunitions from these ships and kept these in his fortress. This is the first time I have heard an outsider suggesting that there was a fortress in this area. Kaufana used to have a fortress here. He stored his guns and gunpowder ('one) in this cliff (mato), hence the place was called the 'Onemato. Taufu'ahau (who later became Tupou 1st) came to 'Eua to ask Kaufana for the guns to help him with the battle in Velata (Haapai). Kaufana offered guns to Taufu'ahau and one of his men who knew how to use the guns to help Taufu'ahau (pers comm Melenaite Lolo, 10 Jan 2012) ('Eua Community Meeting, 2012)</p>
What makes the village unique	N/A
Cultural constraints on visiting	None
Wider setting of site	The site is located on a protruding portion of the cliff face and is naturally fortified by upstanding coral pinnacles (hard coral

Appendix 5.4 - Lauua Lookout, 'Eua Island

	outcrops). The cliff extends 3 to 4 km along the uplifted south-east ridge which forms the mountainous spine of 'Eua. 2 km to the north, the cliff drops to a ridge, across which horses can pass and descend to the coastal platform of Lokupo Beach (Millar & Smith, 2002) page 10.
Site description (brief)	Site accessed from forestry roads that pass through the forest farm. The start of the track is marked by a wooden sign on a post. The route to the site is marked by tied ribbons up a slight slope. The route descends sharply through a natural opening in a 3-4 m high coral limestone outcrop, steeply at first and then curves down a moderate slope to a more or less level area adjacent to the cliff, about 150 m above sea level. The substrate is uplifted weathered coral limestone.
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	The built platform is on the cliff edge. The fortress ditch and bank encloses the cliff edge and the platform. The ditch and bank is 250m long and encloses about a 100 metre frontage of the cliff face.
Plan	See Figure 17, Volume I
Key photo(s)	See Figures 15, and 16, Volume I
Relationship to other sites (cultural and physical)	A second platform on same cliff about 500m to the north (Lokupo Lookout, overlooks Lokupo Beach). The two platforms and the Rat Cave form part of guided walk along the coastal cliffs and down onto the beach.
EXISTING CONDITIONS	
Site condition	
Heritage features	The fortress is in remarkably good condition with long portions of the ditch and bank having well defined features. The area where visitors pass however is slightly eroded, making the ditch and bank less distinct.
Vegetation cover	Vegetation is an open treeland with a ground cover of ground ferns, laukaupouli (scented shrub), birds nest ferns (akaoto), si (cordyline), stinging nettle (selato), kauakauaulie, a small number of papaya and other domestic plants. Canopy trees are mostly tamanu with pua, ovava, fo'ui.
Structures on the site	A New Zealand designed and engineered platform is on the cliff edge. Post-Cave Creek disaster design. Well anchored by concrete counterweight. The platform standing area is just inside in the cliff edge. Appears to be on stable hard coral limestone.
Conditions and uses	Appears to be generally good with stainless steel bolts. But a few bolts and numerous washers and nuts were missing. In wet weather, access would be difficult unless on foot or by 4WD. The vehicles however create deeply rutted tracks, which have been repaired with patches of crushed coral.
Access routes to site	Access from Telephone Road, approximately 3 km (uphill) from the Tonga Forest Products (TFP) office. Route into TFP pine forest farm is chained off key access. Key obtained from TFP office. Track through the pine forest used for hiking as well as working forestry access. Road is an unformed 4wd route. Infrequently used. Total of 3 km of track. Start of the short route through the National Park is 20m from the western boundary of the forest farm. The guide from the Hideaway Resort noted that a small number of guided parties climb the cliff from below the platform (a 50m

Appendix 5.4 - Lauua Lookout, 'Eua Island	
	climb) to access the site.
Current tourism	
Who comes	Now is a restricted area because of safety concerns. Special access allowed because of our visit. Platform hikers dropped off by resort operators. 'Tania's Place' guests use the route, driven to the start of the forest farm roads from where they walk. 'Hideaway Resort' drivers use the farmer road access to transport their guests. International and domestic Tongan tourists. Approximately 200 per year (estimate), small groups, guided tours or backpacker trekkers.
Where from	Visitors are NZ, Australasian, Americans and Europeans. Mostly NZ. Domestic Tongan tourist and VFR taken by locals by tractor 4WD before road was closed by TFP.
Why come	Eco tourism, soft adventure, rainforest experience, bird watching, hikers, botanists
When	In dry season (winter) July to November
Current Income	Not site specific – goes to tour operators
From tourism and other sources at the site	Tour operators
Management issues	<p>Access is dependent on TFP because roads are on their land, although the site is in the National Park. See page 9 (Bellingham & Fitzgerald, 1997).</p> <p>Weather dependant access.</p> <p>Safety and risk – TFP concerned about safety of walkers in areas where heavy machinery operates and their liability in this remote area. TFP now request visitors signed in for safety. Are also considering issuing GPS to users for emergency use.</p> <p>Wayfinding – at present visitors are either guided or self-guided using 2 versions of hand-drawn maps, produced by the resort owners.</p>
Community aspirations	Tongan Forest Products interested in a partnership to develop the road for tourist access but on a charged-for basis. Also, would like to developing campsite at the edge of the forest farm. Not clear who partnership would be with, whether with NZAid for development and with 'Eua Eco-tourism Association or individual operators for on-going operational access.
Is area of site fully protected and surveyed?	Yes (note points about access above) access requires crossing TFP land
Is site fully within the reserve area	Yes, within in National Park
What is tenure, reserve classification	National Park (Eua National Park Act 1992) Management Plan done by Bellingham & Fitzgerald (1997).
Does tenure suit protection and tourist visitation?	Yes, but access issues across TFP managed land (as noted above)
Owners	Tongan Government, through Department of Lands and Survey
Other uses	Moderate level of hunting, gathering of plant products
Uses conflict with tourism?	Perhaps, if guns are used to hunt
Restrictions on use (when, where, under what	None but note park about access through TFP land – see above

Appendix 5.4 - Lauua Lookout, 'Eua Island

conditions)	
Fencing installed, if needed?	None
Hazards	
Physical risks	Cliff edge is marked by a line of hard Carla outcrops upstanding coral mounds which reduce the risk of getting to the cliff edge. The platform itself has a rail. Platform needs periodic safety inspection. Note that the bolts have recently been replaced but without sufficient nuts to make the structure fully secure. Long term physical stability of the cliff edge may or may not have been reviewed as part of the platform construction – it would be desirable to have access to this information for the peace of mind of the operating authority
Climate / climate change risks	None
Habitation Risks	None but attention needed to remove invasive species, will introduce weeds if becomes more open to the weather. Forest fire in pine forest is risk to this area. Increased foot traffic may also introduce weeds
Currently how reduced or mitigated?	See remarks on platform above. Alter the foot traffic to route walkers along the cliff to cross above the ditch from the north which is stony underfoot, and avoid crossing the ditch and bank
Ecological setting	
Causing damage to site	No. Platform – useful to have more sunlight on the platform to keep it drier but would induced more risk for weed invasion. 'Eua Eco-tourism Association trims back vegetation when it gets overgrown
Assists or impedes access	No problems with access to the platform. The treeland under-storey could be the modified to improve the views of the ditch and back and to re-route the track from the northern end, but avoiding the shallow pit
Assists or impedes appreciation of site	Current tree canopy and ground covers do a good job of conserving the surface archaeological features. A stable treeland cover is good protection against natural erosion
Any protected or high-value species, specimen or shelter trees?	Yes but, as noted, an asset not problem
If problematic, how to fix?	
Tracks within site area	
State of tracks	No foot erosion under current usage, track is a route only (not formed) and is cleared of under-storey by the tourism association. Blue ribbons tied on trees annually show where the unformed track is located
Layout and design adequate?	Allows appreciation of site views. Current track gives quick access to the platform however it does not allow very good views of the fortress ditch and bank
Allow appreciation of site	No
Safe	The track crossing the ditch and bank is slippery underfoot and dangerous because of its steep slope, causing erosion and damage to the site. The track down from the coral limestone outcrop is very steep.
Causing damage to site	Yes. The track will in time form localised damage to the ditch and bank

Appendix 5.4 - Lauua Lookout, 'Eua Island	
Need re-design?	Yes
Other infrastructure	No shelter, toilets
Shelter	No
Toilets	No
Assembly and orientation areas	No
Signs and sign adequacy	None
Attractions	Nearby Lokupo Platform and Rat Cave (note Lokupo Platform has the same problem as Lauua Platform – some bolts have been removed. The cliff is also unprotected to the north of the platform. This should be planted with indigenous shrubs to prevent visitor access.
Accommodation	N/A. Accommodation in guest houses on the west coast and on Telephone Road
Amenities (toilets)	No
Activities (on or near the site, eg. Festivals)	No
Carrying capacity	
Current usage (visitor no.s per day, per annum)	200 per annum
Capacity with current infrastructure	500 per year
Free visits / guided / admission	Mixed – some freedom walkers, some guided tours, access on foot.
Group sizes and frequency of visitation	Small group tours, in pairs or groups of 5 (1 guide, 4 vehicle passengers). 50 people a day, maximum
Visitors' perceptions of crowding	Could arise at group numbers of more than 6 people at time at the platform.
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Protection of fortress will need to be improved. Ensure that access is restricted to foot traffic only, not mountain bikes or horses.
Potentials	
Community support potential	High for the concept of eco-tourism use of the platform facility. Cultural and heritage tourism potential, given the important historical stories that may be associated with this site.
Income potentials	More eco-tourists mean more use of facilities and services and income to tour guides and to forestry company if they maintain the road access. Also potential use by mountain bike and horse trekkers.
Other (government, NGO, etc)	If TFP invest in the road, visitor numbers could treble with good vehicle access.
Improve tenure, reserve classification	Legal access to the boundary of the National Park areas needs further consideration
Improve fencing, if needed?	Fencing not needed at Lauua lookout
Hazards, how to be reduced or mitigated?	Platform – need routine inspection, rather than reactive monitoring. Fortress - form a proper track and ropes to hold onto for a new southern access across the ditch. Steep track through the upper coral limestone outcrop. Needs proper steps and handrail.
Ecological setting	
How to prevent damage to site	Plant a shrub barrier across current path to discourage further damage to the ditch and bank. Cease clearing that pathway.

Appendix 5.4 - Lauua Lookout, 'Eua Island

Assist access, e.g. clearance of understorey	Moderate amount of clearance for understory species for the track and to view the fortress would be warranted. Identify another route for clearance but retain important indigenous canopy replacement species.
Vegetation and ecological management	Remove invasive and domesticated species.
Tracks	
Layout and design	See Sketch Map for Lauua Lookout.
Allow appreciation of site	<p>A formed track should extend from the road side, passing up the slope, through the coral limestone outcrop, down the slope and skirting the ditch and bank at the northern end, by passing the shallow pit. Visitors could then overlook the cliff from the viewing platform and circulate the interior of the fort within the defensive ditch, by following the 'wall' of the upstanding coral mounds and the line of the ditch.</p> <p>An alternate path is to construct a loop path that enters from the northern end and exits by the southern stony entry. That however would require additional formed tracks to continue back to the outcrop entrance.</p>
Safety	<p>The viewing area is safe, as long as the complement of bolts and nuts is complete. The platform is in the only part of cliff where coral pinnacles are not present. There are small openings but not easy to pass though. There is however a wider place where a small number of guided parties scale the cliff from below (50 m climb). This perhaps could be closed off so that it cannot be used as a descent if unguided and increased use of the fortress site is encouraged.</p> <p>The pathways will be safe to use if the path is gravelled, with steps and handrails for steep areas and ropes for moderate slopes.</p>
Prevent damage to site	Carefully planned access routes.
Re-design needed?	Yes
Other infrastructure (access, activities, accommodation, attractions, amenities)	If road improved, then car parking may need to be considered, as would bike racks and horse tie-up rail, if mountain bikes and horses are allowed. If these are not included then people may bring bikes and horses to the site, destroying the route, the site features and grazing the vegetation.
Roads	Improved road surface and named road needed for tourism to be effective.
Shelter	Not needed at the site because of canopy trees.
Toilets	Not needed at the site, but useful at the road access point at the end of the sealed road. Rubbish bins needed at platform since people are more likely to rest, linger and talk, and eat at the platform than at the route entrance.
Jetties/wharf/haul-out areas	Not needed.
Assembly and orientation areas	Need orientation space and signage at the start of the route.
Signs and sign adequacy	<p>Signage needs improvement for effective tourism use.</p> <p>Need accurate road and route maps, complete with distance,</p>

Appendix 5.4 - Lauua Lookout, 'Eua Island	
	<p>walking times, emergency numbers and safety procedures.</p> <p>These could be obtained from the TFP HQ (see note above about safety in the forest farm and national park), the 'Eua airport and accommodation.</p> <p>Sign needed at the forest park access entrance, and at the route to the Lauua and Lokupu lookouts. The Rat Cave should be guided only since there is no barrier to the sheer drop at the cliff edge mouth of the cave and the cave itself is narrow, with difficult access.</p>
Pamphlets or other interpretation literature	Guide maps required for users
Visitor satisfaction surveys	None
Training of guides	Guides from resorts should have updates as the site is developed and new information is located.
See also Excel spreadsheet for existing and future costs	Appendix 10.4
What is being done at the sites now	<ul style="list-style-type: none"> • 'Eua Ecotourism Association acts as proxy caretaker, replacing bolts (if supplied), clearing vegetation and rubbish from the Lauua and Lokupu lookouts. • 2 guest houses supply hand-drawn maps to guests as freedom walkers. • Since 2011, Tonga Forest Products restricts access, unless register at HQ (forestry vehicles alongside walkers, inadequate signage or maps, potential for injury and getting lost). Also local traffic using 4WD and tractors damaged the road.
What is hoped for in the future	<ul style="list-style-type: none"> • Phase I: If road not developed then build track / step, signage, guide maps. • Phase II: If Tonga Forest Products develop the road, then car park, rubbish collection / bins, site carrying capacity need to be considered.
Issues (positives and negatives) for long term community maintenance and management for the sites	<ul style="list-style-type: none"> • Consult geotechnical engineer for cliff safety. • At present 'Eua Eco-tourism Association is very active and Tonga Forest Products willing to develop the road. • Stainless bolts needed to make platform safe. • Tongan Forest Products - interest in road improvement (fee access to visitors), camping facilities, safety of public users, provide GPS for tourist users and possibly routine maintenance of platform. Site arrivals on foot or by 4WD. • Must cross TFP land to access. If TFP invest in the road, visitor numbers could treble with good vehicle access.

References

- 'Eua Community Meeting. (2012). 'Eua Community Meeting. Held 10th January at Molipeli Conference Room, Ministry of Agriculture, 'Onohua, 'Eua Island.
- Bellingham, P., & Fitzgerald, G. (1997). *Management Plan for 'Eua National Park, Kingdom of Tonga*. Lincoln, New Zealand: Landcare Research for the New Zealand Ministry of Foreign Affairs and Trade.
- Millar, I., & Smith, D. (2002). *Caves and Tourism, 'Eua, Kingdom of Tonga, October 2002*. Wellington, New Zealand: Department of Conservation, New Zealand.

Appendix 5.5 - Velata Fortress, Ha'apai

BASIC DATA	Figure 18, 19, and 20, Volume I
Site name (s)	Velata or Kolo Velata
Supporting village name	Ha'ato'u Village
Location	
Lat and long	19 ⁰ 49'02.5"S 174 ⁰ 21'07.1"W
Address and/or other location details	1 km south of central Pangai on Holopeka Road (main road to south) and then west at the Free Wesleyan Church, some 450m to the Pangai water tower (passing the Mormon church on the corner of Loto Kolo Road). Entry is a mowed strip about 200m down the water tower road.
Distance in km from supporting/nearest villages	
What is the site interest	
What makes the site unique?	<p>A major ditch and bank fortification very important in the history of the ascendancy of the modern Tupou Kingship lineage in Tonga. Stories say that one fellow was shot with a spear through the gate. Note: Talei 'Ulufonua's father knows the stories of Velata.</p> <p>The name Velata is taken from Tupou I's povai (weapon used in war). When someone was hit by this povai, that person can be burned by it. (Vela) is burn, (ta) is to be hit by. There was a povai called Velata that was taken by Ma'afu to conquer Fiji (Ha'apai Community Meeting # 1, 2012)</p> <p>Entrance to Velata fortress on the north side is very significant to the living descendants. Location not found yet. The entrance is located on the side closer to Fanganonu (a place where Nonu plants were plentiful). (Ha'apai Community Meeting # 1, 2012).</p> <p>Kolotau ko Velata – Ko e kolotau eni 'o Laufilitonga, ko e Tu'i Tonga fakamuimui taha. Ko hono ikuna'i 'e Taufā'ahau 'a e kolotau ko eni' na'e fakangatangata 'a e fakaaaoa 'a e pule 'a e Tu'i Tonga. Pea fakaava ai 'a e matapā ki hono fā'u 'o e Tonga fo'ou (modern Tonga).(Johansson Fua <i>et al.</i>, 2011)</p>
What makes the village unique	
Cultural constraints on visiting	None
Wider setting of site	Site lies on sand on the slightly raised atoll landform of Lifuka Island, 400 m from the sheltered west coast but also accessible from an ancient canoe landing in historical times at Fanganono Village at the Beach (possibly known as Poseidon's Gate) accessed via an ancient road about 1.2 km away on the east coast. The road runs around the northern perimeter of the site.
Site description (brief)	
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	Terrain is a level sand plain probably underlain by coral limestone.
Plan	Site has been described in plan form by McKern (McKern, 1929) and Marais (1995, view in Burley, 1998p. 378). See Figure 20, Volume I.
Key photo(s)	See Figure 18 and 19, Volume I.

Appendix 5.5 - Velata Fortress, Ha'apai

Relationship to other sites (cultural and physical)	Ancient, partly sunken road runs from the northern perimeter and gateway south-east to the eastern coast and coral reef platform.
EXISTING CONDITIONS	
Site condition	
Heritage features	The double ditch and bank recorded by McKern in 1929 is still able to be distinguished but is heavily eroded by rain and pig-rooting. Cropping is carried out throughout the site, except on the mound on the southern perimeter (near the southern grassed laneway entrance with signage plinth). Stone-lined causeway at base of mound, northern side. Mound described as a Sia at the Community Meeting #1. Cropping also near the road on the northern perimeter. There is one house and roadway inside the eastern perimeter.
Vegetation cover	Cropping and fallow land for the most part, but with some tree land cover especially on the mound.
Structures on the site	
Conditions and uses	Sign board and concrete marker on concrete plinth with polished black marble, engraved plaque by entrance way. Entrance way is grassed and mowed from the road edge to the plinth. Signage installed by Ha'apai Tourism Association
Access routes to site	At present the site is best accessed via the grassed lane from the water tower road and from the ancient road running south-east from the Pangai generator plant.
Current tourism	
Who comes	Very few international or domestic tourists. Probably also VFR because site is well known in the local community.
Where from	Tonga, Ha'apai
Why come	Historical interest
When	All year round
Current Income	None. Site known by word of mouth amongst the community. Identified as a point of interest at the Ha'apai Visitor Bureau in Pangai and in their brochure
From tourism and other sources at the site	Very low
Management issues	
Community aspirations	The Community Meetings #1 and #2 support recognition and community management of the site area because of its significance to Tonga's history and in particular Tupou 1's role in unifying Tonga. Site is privately owned in two lots, by two owners. Molitoni Vilopau and Felete Ikatau. Suggestions that the Government reclaim and exchange with some government land elsewhere on Lifuka (Ha'apai Community Meeting # 1, 2012), (Ha'apai Community Meeting # 2, 2012)
Is area of site fully protected and surveyed?	No. Privately owned.
Is site fully within the reserve area	NA
What is tenure, reserve classification	Private tax allotments.
Does tenure suit protection and tourist visitation?	No
Owners	Private land, owned by and Felete Ikatau. The fortress acreage is split in half between them. The headstone is located on Molitoni's land (because he was supportive of the project) but the Sia is

Appendix 5.5 - Velata Fortress, Ha'apai	
	located on Feleti's land.
Other uses	
Uses conflict with tourism?	Visiting via the private land to selected parts e.g. the southern mound and the northern perimeter is relatively easy and appears to be a continued possibility.
Restrictions on use	Possibly, subject to owners' wishes and cooperation.
Fencing installed, if needed?	Some fencing of tax allotments.
Hazards	
Physical risks	Stumbles and injuries on fences.
Climate / climate change risks	No
Habitation Risks	Houses are located in the centre of the fortress. Presumably there are ancient occupation sites in the centre which may have been modified or destroyed if land has been ploughed and when house was built. Subsistence horticulture would have less impact. Grazing animals contribute to wear on the ditch and bank
Currently how reduced or mitigated?	No
Ecological setting	
Causing damage to site	On-going pig rooting is causing damage
Assists or impedes access	Reverting shrubland fallow (kasea shrub) is obscuring views and makes access difficult
Assists or impedes appreciation of site	
Any protected or high-value species, specimen or shelter trees?	No. Current treeland cover includes kape (taro), kasea shrubland (post cultivation fallow), coconut, tava, tavahi, mango, telie, moli (citrus).
If problematic, how to fix?	Some clearance of undergrowth is needed either on a routine basis or on a visit by visit basis using a slasher.
Tracks within site area	
State of tracks	Some minor access roads.
Layout and design adequate?	No, except ancient northern road follows the northern perimeter in part.
Allow appreciation of site	Partially
Safe	Yes
Causing damage to site	Road to the largest house has gone through the ditch and bank but allows for good visibility of the profile.
Need re-design?	Yes
Other infrastructure	
Shelter	No
Toilets	No
Assembly and orientation areas	Yes, by water tower land area.
Signs and sign adequacy	One ageing sign details plan layout and brief history
Attractions	Several historic buildings in Pangai, and many events important to the story of the establishment of King George Tupou I
Accommodation	In Pangai village
Amenities (toilets, parking)	Off road parking on grassed laneway
Activities (on or near the site, eg.	Area known for whale watching and diving

Appendix 5.5 - Velata Fortress, Ha'apai

Festivals)	
Carrying capacity	
Current usage (visitor nos per day, per annum)	50 pa
Capacity with current infrastructure	1,000 pa
Free visits / guided / admission	Free
Group sizes and frequency of visitation	2 to 4
Visitors' perceptions of crowding	No
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Yes, some areas could be reserved e.g. around the mound and across to the access lane, as well as equivalent area on the curve of the northern ancient road that skirts the northern ditch and bank
Potentials	
Community support potential	Good but management and maintenance issues
Income potentials	Low to moderate, given relatively low visitor numbers to Ha'apai.
Other (government, NGO, etc)	Tourism Visitor Bureau
Improve tenure, reserve classification	Yes
Improve fencing, if needed?	Yes
Hazards, how to be reduced or mitigated?	Guiding, install signs, stiles
Ecological setting	
How to prevent damage to site	3 monthly clearance of scrubland to permit viewing of the historic features
Assist access, e.g. clearance of understorey	Yes
Vegetation and ecological management	Some inter-planting of canopy trees would be desirable in reserve or fenced areas.
Tracks	
Layout and design	Current layout does not permit appreciation of the site, needs redesign.
Allow appreciation of site	Develop both the current access, a walking tour to a 'twin' access with off road parking and signage. Enhance by track work, fencing to keep out pigs and stiles/ steps for steep slopes
Safety	Not an issue except for fences which could be crossed by stiles
Prevent damage to site	Fence to keep out animals
Re-design needed?	Yes. A circuit walking track from the current entrance lane to the mound and thence to the ancient northern road would be warranted.
Other infrastructure (access, activities, accommodation, attractions, amenities)	
Roads	Good exterior roads. Minor landowner access roads on site
Shelter	A shelter in the entrance lane at both the north and south sides may be warranted for orientation and could incorporate improved signs.
Toilets	Not warranted. Visit time is likely to be less than 30 minutes at either location
Jetties/wharf/haul-out areas	NA
Assembly and orientation areas	Adequate in access lane. May be needed in northern road
Signs and sign adequacy	Need to be improved

Appendix 5.5 - Velata Fortress, Ha'apai	
Pamphlets or other interpretation literature	Yes, a pamphlet, new plan, short history and an imagined perspective view would be good. Core information duplicated at each location with specific information about the respective features
Visitor satisfaction surveys	Yes
Training of guides	Yes
See also Excel spreadsheet for existing and future costs	Appendix 10.5
What is being done at the sites now	See above
What is hoped for in the future	<p>Community (owners) would like to earn direct income from the site of Velata. Ambitious plans for development in its interior lands such as accommodation, meetings and performance centre (Ha'apai Community Meeting # 2, 2012). Velata and Uiha have local communities who can develop and maintain the sites. For sustainability it would be better to invest in Uiha because it has more cultural and historical sites. Need a boat connection between Uoleva and Uiha. Every boat that visits Uoleva can also visit Uiha (Ha'apai Community Meeting # 1, 2012).</p> <p>Develop the site further to encourage tourism to Ha'apai. But there are several other sites that could be developed and are as important:</p> <ol style="list-style-type: none"> On Lifuka - Niu'ui Hospital, commemorative stone for Tupou I's birthplace Also Port Au Prince landing place – Koulo, where Mariner was captured and crews were killed European Cemetery where Shirley Baker is buried, but there are also other people from Scotland and England buried there Uiha Island has the Makahokovalu, Mala'elahi (royal family graves), Vai-ko-Tafetafe the Makatoli'a, Fu'u Toa ko Taufa'ahau and the story of the twins Saulala and Haveapava Kolotau pa-lesi, Maka Ko Fele'unga on Ha'ano Island, (Ha'apai Community Meeting # 1, 2012).
Issues (positives and negatives) for long term community maintenance and management for the sites	<ol style="list-style-type: none"> Issues of land ownership - Velata owned by two landowners. Possibly return the land to government by an exchange of land from elsewhere in Pangai Development – add a new commemorative stone at the entrance to Velata fortress. Location not found yet. Maintenance could be undertaken by TVB (government funded) Operations - community and owners collectively decide level of activity. (District and Town Officers meet the two owners) Tourism access to Ha'apai – restricted by limited air access, ferry once a week. Infrastructure – signage damaged during hurricane, not replaced

References

- Burley, D. V. (1998). Archaeology and the Tongan past 2850-150 B.P. *Journal of World Prehistory*, 12(337-392).
- Ha'apai Community Meeting # 1. (2012). Ha'apai Community Meeting # 1. Held on 13th January at USP Ha'apai Campus, Pangai, Ha'apai.
- Ha'apai Community Meeting # 2. (2012). Ha'apai Community Meeting # 2. Held on 16th January at USP Ha'apai Campus, Pangai, Ha'apai.
- Johansson Fua, S., Tuita, T., Kanongata'a, S. L., & Fuko, K. (2011). *Cultural Mapping, Planning and Policy: Tonga*. Nuku'alofa, Tongatapu, Tonga: Secretariat of the Pacific Community on behalf of the Ministry of Education, Women's Affairs and Culture, Government of Tonga.
- McKern, W. C. (1929). *Archaeology of Tonga*. Honolulu: Bernice P. Bishop Museum.

Appendix 5.6- Hufangalupe, Tongatapu Island

BASIC DATA	See Figures 21 and 22, Volume I
Site name (s)	Hufangalupe
Supporting village name	Vaini
Location	
Latitude and longitude	21 ⁰ 13'58"S 175 ⁰ 11'26"W (arch feature)
Address and/or other location details	End of Hufangalupe Road on south coast
Distance in km from supporting/nearest villages	3 km
What is the site interest (brief highlights), should be sourced from cultural mapping data	Traditions say that the name Hufangalupe means a place where doves go for refuge when injured. <i>Hufanaga</i> means 'a place of refuge', <i>Lupe</i> are 'doves'. When doves are injured they land on the rocks to rest and recover. The sea spray heals them. Hufangalupe is also said to be the head of the <i>moa</i> , associated with legendary <i>Maui</i> , whose wings spread westward to Mapu'a Vaea (the Blowholes) and eastward to Fu'amoto (Matapule of Vaini Village, 2011)
What makes the site unique?	This is the only arch feature and principal cliff landform on Tongatapu. The village and coastline area is known as Makeke because it used to be a rubbish dump (means 'dispose and not see anymore'). There are four caves in a system that extends inland from the coast. A second cave, adjacent to the access road, collapsed in the 1960's in which there is a spring water lake (Vaini Village Community Meeting Notes, 2011)
What makes the village unique	The village is part of the seat of King George Tupou I, blood relative of Lord Ma'afu who is Estate Holder for Hufangalupe. The beach is not commonly used today but in the past could have been a landing place for boats and fishing. It is known for its excellent beach and long lines or set lines fishing off the cliffs (Lord Ma'afu, 17/11/11). The beach is the only place in this area where locals can swim in clean, safe, open water. It has a history of recreational use as a place to relax.
Cultural constraints on visiting	None. This is a secular place (unlike Ha'amonga where there are <i>langi</i> (burial mounds) and past settlement <i>paepae</i> (house platform)
Wider setting of site	On cliff edge facing to the south-west. The area is exposed to south-east trade wind.
Site description (brief)	
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	Coastal cliffs, sea caves, short length of beach, rock archway fronting 25 m altitude coral limestone terraceland. Sink holes. Other karst sinkholes further inland closer to Liku Road
Plan	Plan prepared, Figure 22, Volume I
Key photo(s)	See Figure 21, Volume I
Relationship to other sites (Cultural and physical)	Tangakie Point is west of Hufangalupe, the first prominent point from above Hufangalupe beach. A public road leads to Tangakie Point. The nearby agricultural experimental station (field trials of new species) has potential to be included in a tour. The King's residence is Kauvai in Longoteme, near the Fuamote Airport to the east of Hufangalupe. There are excellent examples of subsistence horticultural plots on Hufangalupe Road. Clare Huni runs tours to these farm plots. Toloa College, an all-boys school over 100 years old, set up by the London Missionaries in 1866 by a museum, sheep, a community farm is located near to the site. Also it is the first known Royal compound, the Royal Palace, Ahononou Beach,

Appendix 5.6- Hufangalupe, Tongatapu Island

	Maka'akau. The whole block could be developed as royal tour. Holei Beach - Hina's Cave is a lookout to south east where one can see the whole of 'Eua Is. A tour could incorporate a loop on the south east corner, its theme - natural sites and agriculture tour. Beaches, caves, horticulture, agriculture.
EXISTING CONDITIONS	
Site condition	
Heritage features	Natural site only with some cultural associations
Vegetation cover	
Forest, open treeland, shrubland, grassland, paving, cultivation	Tall ungrazed grassland on flat land with a fringe of Pandanus and salt-tolerant creepers on cliff edge. There is a low treeland/shrubland in the slopes leading down to the natural arch and on the slopes in the rear of Hufangalupe Beach.
Structures on the site	None
Condition and uses	
Access routes to site	
Roads, foot track, within/adjacent to village, sea, beach	From Hufangalupe Road from Vaini, approximately 10 mins from main road. Informal 4 wheel drive track, rutted and muddy in places within the reserve area. Parking area has been consolidated with extra coral gravel.
Current tourism	
Who comes	Local people, approximately 200 vehicles per annum (to judge from state of the informal track) and approximately 500 people per year (to judge from grassed desire lines) walk beyond the Archway.
Where from	Local people. VFR visitors. Local people bring foreign guests. Some tour groups run by Town Officer. Visited by school geography classes.
Why come	Fishing off cliff - set lines left over night, from beach (track down to the beach) dating (anecdotal evidence). VFR bring friends and family to the site. Cruise ship visitors could come in buses but not at present. Rubbish dumping in the past is now controlled.
When	Daytime, some night fishing and dating. Casual use.
Current Income (from tourism and other sources at the site)	Not known but probably low
Management issues	There is real risk to life if the site were to be developed
Community aspirations	Income generation for village. Potential for handicrafts. Preserve culture and traditions. Fishing. Are local recreational uses and cultural linkages, but main reason for visiting is the natural features.
Is area of site fully protected and surveyed?	Coastal reserve under management control of Vaini Village and Lord Ma'afu as Minister of Lands and estate holder
Is site fully within the reserve area?	Reserve strip averages 120 m but varies. Capable of containing any desirable track, buildings, car park, etc. Western end of Hufangalupe Beach to Tangakie Point has a separate legal road but not a formed road. At western and eastern ends of the reserve there appears to be formed roads which could be used for access.
What is tenure, reserve classification	Government Land
Does tenure suit protection and tourist visitation?	Yes, within reserve areas. Bordered inland by subsistence-agriculture tax allotments
Owners	Government land. Overseen by Lord Ma'afu

Appendix 5.6- Hufangalupe, Tongatapu Island

(live locally, elsewhere on island, overseas?)	
Other uses (graves, fruit gathering, grazing)	Fishing. Has been rubbish dump for many years (now forbidden). Casual sightseeing. Beach is used for local picnics, fishing and swimming (anecdotal).
Uses conflict with tourism?	No
Restrictions on use (when, where, under what conditions)	Cliff edge and archway cavern give rise to safety issues. We propose restrictions on vehicle traffic over archway 'bridge' beyond the unformed track. No cultural restriction.
Fencing installed, if needed?	No
Hazards	
Physical risks	Physical risks are high cliff edge. Cliff edge obscured by vegetation. Cliffs are eroding in the long-term. Can slip on soft clay soils. Friable soil on slopes when dry.
Climate / climate change risks	Potential increase in wind, already very strong. Sea level rise will obscure and eventually erode the visually interesting raised coral wave platform at current high water mark.
Habitation Risks (farm stock, people living on /near the site, invasive species)	Continued rubbish dumping. Cattle are let in at times.
Currently how reduced or mitigated?	Rubbish dumping is now forbidden. Cars to be discouraged from driving over archway.
Ecological setting	
Causing damage to site	No.
Assists or impedes access	Vegetation extends to cliff edge and thick growth in access to the beach.
Assists or impedes appreciation of site	Grassland very important to maintaining coastal views
Any protected or high-value species, specimen or shelter trees?	Ecological survey may be desirable.
If problematic, how to fix?	
Tracks within site area	Informal 4 wheel drive tracks.
State of tracks	Informal vehicle and walking tracks.
Layout and design adequate?	No. Direct vehicle access to narrow archway and cliff edge increases risk to visitors.
Allow appreciation of site	Yes, but dangerous.
Safe	No
Causing damage to site	Yes
Need re-design?	Yes
Other infrastructure Perhaps in supporting village, how far (km), condition?	Yes (within 5 km) for example: the Agricultural Experiment Station and subsistence farm plots.
Shelter	No
Toilets	No
Assembly and orientation areas	No
Signs and sign adequacy	No
Attractions	No
Accommodation	No
Amenities (toilets)	No

Appendix 5.6- Hufangalupe, Tongatapu Island

Activities (on or near the site, eg. Festivals)	No
Carrying capacity	
Current usage (visitor numbers per day, per annum)	Estimate of 900 visitors per year.
Capacity with current infrastructure	Capacity high, but poor roading access and parking restricts numbers.
Free visits / guided tours/ admission	500 free, 400 guided.
Group sizes and frequency of visitation	1-8 people, 2 per week.
Visitors' perceptions of crowding	No crowding
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Not needed provided infrastructure improvements are made.
Potentials	
Community support potential	Facilities such the informal tracks and parking are too closely imposed on the attraction (same as at Ha'amonga) so impede enjoyment and site aesthetics and do not produce a sense of drama on approach.
Income potentials	Car parks for 10 vehicles or 2 medium sized buses e.g. cruise liner visits (12 people per bus or 12.5% of passengers might visit from each cruise ship = 150 people). 150 people @ \$20.00 per head = \$3000 cruise ship income. Assuming 2000 guided visits per annum, this could be harvested by the village at\$ 100 per head (3 attractions, including a meal). If organised directly by the village with the cruise liner then 3 villages could share the proceeds without an intermediary, each village would see \$15.00 per visitor. Assuming an average spend of \$10 at one souvenir market, depending upon quality and distinctiveness of the handicrafts from others available elsewhere. Max \$20 per visitor per village and perhaps 3,000 visitors per annum in 20 week cruise ship season. The 900 current visitors might be expected to double with an upgraded site. However current visitation is local; and introduction of charging regime drops visitation by at least 50%, so that combined total of 4000 visitors might be reasonable.
Other (government, NGO, etc)	Charge for toilet use. Charge for site entry - donation for site upkeep \$2.00.
Future tourism potential	
Future site capacity (if improvements made)	
Improve tenure, reserve classification	No
Improve fencing, if needed?	Stainless steel posts, wires. Keep people on solid ground. Platforms to provide views, experiences (birds, the ocean spray, a staircase down the sink hole, staircase and a track into the gully with the forest behind the beach.
Hazards, how to be reduced or mitigated?	Mandatory guiding given the risks. Risks - as soon as improvements are made the operators and village need to be prepared to accept visitor risks. Visitors to the site must be briefed on dangers and accept risk and liability for their own actions. Will need training for guides, safety briefing.
Ecological setting	
How to prevent damage to site	

Appendix 5.6- Hufangalupe, Tongatapu Island

Assist access, e.g. clearance of understorey	May be needed for track to beach and into sinkhole
Vegetation and ecological management	Revegetation of the grassland. May be possible to do some sympathetic planting in the grassland but maintain the views. In the secondary forest behind the beach are substantial trees. Sympathetic planting within it and tracking is needed.
Tracks	
Layout and design	See sketch plans Figure 22, Volume I. Formed walkway and fences are needed near cliff edge views. Also a loop track around the sink hole lining with the main coastal track.
Allow appreciation of site	Needs to keep people from the cliff edge but in places allow for the best coastal views, exact route needs further assessment and design.
Safety	Needs close consideration
Prevent damage to site	Exact route and specifications are needed. A wooden stairway could be designed to go down into the sink hole from the loop track to allow views of the archway and seas, surf and waves
Re-design needed?	Yes
Other infrastructure (access, activities, accommodation, attractions, amenities)	Needs to keep peoples from the cliff edge but in places allow for the best coastal views, exact route needs further assessment.
Roads	Hufangalupe Road needs periodic maintenance and needs a formed car park for the site. Location to be determined. Allow for two-way bus vehicle traffic
Shelter	A shelter and area for orientation signs should be established near the car park.
Toilets	Needs toilet block, septic tank and field tiles. Water supply will be needed with a bore and solar pump.
Jetties/ wharf/ haul-out areas	No
Assembly and orientation areas needed	Yes
Signs and sign adequacy	Sign needed in Vaini Village from Taufu'ahau Road to Hufangalupe. On-site signs must include safety messages and orientation sign of the area. Signs along the tracks could cover specific warnings about the cliffs and geological and bird information, trade winds (at least 4 signs)
Pamphlets or other interpretation literature	Yes
Visitor satisfaction surveys	Needed
Training of guides	Yes - critical
<i>See also</i> Excel spread sheet for existing and future costs – Appendix 10.6	
1. What is being done at the sites now	
2. What is hoped for in the future	
3. Issues (positives and negatives) for long term community maintenance and management for the sites	

Appendix 5.7- Feletoa Fortress, Vava'u Island

BASIC DATA	See Figures 23, 24, and 25, Volume I
Site name (s)	Feletoa
Supporting village name	Feletoa
Location	
Lat and long	18 ⁰ 35'48.3"S 175 ⁰ 58'7"W
Address and/or other location details	On Hala Tu'i, the old main road north from Neiafu township to the Vava'u airport. The road is now a subsidiary and has been replaced by the new Chinese Aid road to the east.
Distance in km from supporting/nearest villages	Village is inside the old fortification boundary
What is the site interest	
What makes the site unique?	<p>A major double ditch and bank fortification. A key site to the ascendancy of the modern Tupou Kingship line and for the unification and identity of the Kingdom of Tonga. The village is probably on the site of the older village defended by the fortification under the command of the vanquished Ulukalala (c. 1820?).</p> <p>Feletoa Kolotau Feletoa – Ko e kolotau eni 'o 'Ulukālala ko e to'a 'o Vava'u pea na'e a'u mai ki Tongatapu ni 'ene fakaaao.(Johansson Fua <i>et al.</i>, 2011)</p> <p>The following information was sourced by Dr Masasso Paunga: Feletoa the name is literally composed of "fele" (a lot or many), "'a e" (of), "to'a" (heroes or brave men).</p> <p>The historical significance of Feletoa is based on its being the strongest and hardest fort to conquer in all of Vava'u. It was the last independent fort (under 'Ulukalala) to exist before the re-unification of Tonga under the Tupou dynasty. The Feletoa Fort belonged to Finau 'Ulukalala.</p> <p>The mother of Taufa'ahau (who was to be come Tupou I) was from Tongatapu. However, most of his youth was spent on Ha'apai and Vava'u.</p> <p>When Taufa'ahau fought Laufilitonga (the Tu'i Tonga) at Velata Fort, he seems to have been using the help of Kaufana from 'Eua who had offered Taufa'ahau the canons with the gun powder that had been hidden on 'Eua, just possibly at La'ua.</p> <p>Conquering Velata Fort made Taufa'ahau the Tu'i Ha'apai. From there he went to Vava'u. Finau 'Ulukalala had already passed away and his son 'Ulukalala was at the Feletoa Fort. It was this 'Ulukalala who made things easy for Taufa'ahau to become Tu'i Vava'u.</p> <p>'Ulukalala had brought Ha'apai and Vava'u warriors to start fighting against Pea Fort and other Tongatapu forts such as Ngele'ia and Nukunuku Forts.</p> <p>After the defeat of Laufilitonga (the Tu'i Tonga) at the Velata Fort</p>

Appendix 5.7- Feletoa Fortress, Vava’u Island

	<p>in Ha'apai, Finau became the Tu'i Ha'apai. Finau felt the need to strengthen his power in Vava'u foreseeing that Tautafa'ahau must eventually come to Vava'u.</p> <p>Obviously for Finau to strengthen himself in Vava'u it was necessary to get rid of the great warriors of Vava'u who at the time were the Feletoa warriors only. Finau planned the plot to invite the Feletoa men for a peaceful reconciliation with the Vava'u people. There, the Feletoa warriors, innocently and unarmed, attended the meeting in which Finau had already arranged for the capture of the Feletoa warriors, to be tied and drowned at sea! This was a plot against his own men and heroes.</p> <p>So, by the time Tautafa'ahau came to Vava'u there were no longer warriors around. In addition, Tautafa'ahau was coming with a Christianising intention or mission - not for war. It can also be seen that Finau had not in fact strengthened his might in Vava'u for he got rid of the brave men of Vava'u who could have stood up for a fight against Tautafa'ahau.</p> <p>As fierce, frustrated, and angry warriors, it is said that these Feletoa warriors maintained an intense hatred to their traitor-leader, Finau 'Ulukalala; they kept swearing at him even with sinking bubbles while drowning! (pers comm. Dr M. Paunga, Tongatapu, 19 February, 2012)</p>
What makes the village unique	
Cultural constraints on visiting	None but the eastern part is in the backyards and allotments of the village households.
Wider setting of site	
Site description (brief)	The site is a circle of double ditch and bank about 400 m in diameter and with other ancillary defences occupying the upper sides of abroad ridge. There is a track and canoe landing on the south side on the Vaipuna Inlet.
Terrain description (flat, steep slope, ridge, cave, coastal platform, beach)	The site is on the first broad ridge running north-south on the eastern side of the inner sheltered reaches of the Vaipuna Inlet. The sides are moderately steep down to the inlet and the ground rises to the interior on the south side.
Plan	Figure 25, Volume I.
Key photo(s)	Figures 23, 24, Volume I.
Relationship to other sites (cultural and physical)	The site is related to Mataika, the adjacent town to the south, where it is said that the chiefs of Feletoa went to parley, were captured and killed. The site is also of the same era and with the same associations as Velata on Lifuka Island, Ha'apai.
EXISTING CONDITIONS	
Site condition	
Heritage features	The outer and inner ditches and banks are separated by about 22m (from crest of outer bank to crest of inner bank). The shape and form of the ditches and banks are intact and readily viewed for much of the eastern part but they have been damaged or buried by a new football field on the east of the main road coming in from the south (from Mataika). The football field appears to have covered over the gateway named Fatungakoa (McKern, 1929). The ditches and banks are also destroyed on the north-east side east of the road where there is a modern cemetery.

Appendix 5.7- Feletoa Fortress, Vava'u Island

	<p>Opposite, to the west, the profile of the ditches is again clear. On the west side the ditches and banks appear to be in good order (but were not fully walked on our visit, 12/1/12). The ground between the ditches at this point is known as Hala Mate (Road of Death). The sinkhole and water source is in good condition (minor rubbish).</p> <p>There are a number of langi within the site area including the grave of Ukulalanga II which is 20 x 25 m in plan and lined with good upstanding coral slabs. There are other eroded langi and possibly a sunken road nearby to the south. A langi, Fale Ulu, at the north-east and a small two-tier langi on the south-west are also in good condition.</p> <p>In the fortress, we have the 'Esi 'o 'Ulukalala II – Ulukalala's grave and his daughter's grave. There is also a lepa (a place for collection of water), a very ditch. This lepa was called Tukitou. The place was surrounded by the plants called "Motou" and hence the lepa was named Tukitou. There is vai (spring) that is located underground, which is called Vaitō. There are other vai around the fortress which were used by the warriors for bathing. They could swim in the sea and also bath in these vai (springs). One was named Ma'unga Loloko. Another was known as Vaitou. There is a need for more discussion of the fortress, its history and what are the significant places inside the fortress.</p> <p>There are two roads/pathways which run from Feletoa which almost reach the sea. These are known as Hala Mate (Death Road). Some of the significant places in the Fortress are:</p> <ol style="list-style-type: none"> 1. Matapa ko Fatungakoa (Futungakoa Entrance or Gateway) – This is the entrance to the Fortress, and Fatungakoa is making reference to the koa (?) of people's blood who died in the fortress. 2. Fono-Ki-Moana – This is another entrance in the fortress 3. Puna-Ki-Langi 4. Moli-ko-Fietu'i – Ulukalala used to get them to fight with the Moli (orange) tree 5. Maka 'o e Tu'i Feletoa. No one could move this maka (rock). This is located at the Feletoa primary school. 6. There is also the 'Esi-ko-Faleula, which was the residence for the 'Ulukalala's taula (healers). The twins from Tefisi are also significant to Feletoa's history (Source: Siketi Mailangi) <p style="text-align: right;">(Vava'u Community Meeting #1, 2012)</p>
Vegetation cover	The area is partially made up of house plots with rear yards and tax allotments with kape, taro, kava and other plants. A good part of the eastern perimeter has an attractive treeland cover with bare soil and pig-rooting at ground level. The western perimeter is also a treeland but not open at ground level. The trees are tutava, mango, oranges/citrus, ifi, tavahi, coconut.
Structures on the site	There are no structures for visitors such as interpretive signs, walkways, etc. The village of Feletoa sits in the interior of the fortress ditch and bank. The village is about 80 houses and a primary school spread along about 400 m of road. The school ground area may be suitable for visitor orientation at the 'Welcome to Feletoa Fortress' sign outside the school.

Appendix 5.7- Feletoa Fortress, Vava'u Island	
Conditions and uses	NA. The school is well maintained.
Access routes to site	Informal tracks and through back sections of the houses. Road runs through the site area with a few salamata (dead end roads) running across to the ditch and bank areas. Tufutele, the Mataika landing on Vaipuna Inlet may be used to access the site area, by coming up from there to Sangata Malia (Saint Mary) Road.
Current tourism	
Who comes	Very few. Some school groups.
Where from	Vava'u towns
Why come	Historical interest
When	School term
Current Income	Nil
From tourism and other sources at the site	Nil
Management issues	
Community aspirations	Seketi Mangai a prominent local landowner who supports tourism visiting. Feletoa Village Officer is also supportive.
Is area of site fully protected and surveyed?	Unclear. There may be some Royal land in the area but otherwise the land is houses and yards with some unused forest on the west side.
Is site fully within the reserve area	NA
What is tenure, reserve classification	Houses and tax allotments
Does tenure suit protection and tourist visitation?	No
Owners	One principal owner, but multiple tax allotments and land owners. Possible Royal land.
Other uses	
Uses conflict with tourism?	The rear of the house yards could be used for occasional visiting with guides.
Restrictions on use (when, where, under what conditions)	With local guides. Unrestricted walks through house yards is impractical
Fencing installed, if needed?	Household fencing on ditches and banks holding in pigs and sheep.
Hazards	
Physical risks	Stumbles, slippery clay, fences, road traffic, 8 m high cliff above sink hole on the western side.
Climate / climate change risks	No
Habitation Risks	Dogs, roaming free.
Currently how reduced or mitigated?	NA
Ecological setting	
Causing damage to site	Pig rooting will have long term effects and damage the site
Assists or impedes access	A good open treeland on the eastern side
Assists or impedes appreciation of site	Assists
Any protected or high-value species, specimen or shelter trees?	None apparent. Does not warrant ecological survey.

Appendix 5.7- Feletoa Fortress, Vava'u Island

If problematic, how to fix?	
Tracks within site area	
State of tracks	None
Layout and design adequate?	No
Allow appreciation of site	No
Safe	N/A
Causing damage to site	No
Need re-design?	Yes
Other infrastructure	
Shelter	None
Toilets	None
Assembly and orientation areas	“Welcome to Feletoa Fortress” sign outside the school.
Signs and sign adequacy	NA
Attractions	NA
Accommodation	No
Amenities (toilets)	No
Activities (on or near the site, eg. Festivals)	Could be linked with visit to ‘Ene’io or with travel to/from airport.
Carrying capacity	
Current usage (visitor nos per day, per annum)	Very low
Capacity with current infrastructure	Low
Free visits / guided / admission	None
Group sizes and frequency of visitation	NA
Visitors’ perceptions of crowding	NA
FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Yes
Potentials	
Community support potential	High. Good complementary attraction to other activities that are weather dependent
Income potentials	Low to moderate, 1500 pa @ T\$60 per visit?
Other (government, NGO, etc)	
Future tourism potential	
Future site capacity (if improvements made)	
Improve tenure, reserve classification	Yes
Improve fencing, if needed?	Yes
Hazards, how to be reduced or mitigated?	Tracks and stiles, guiding for all visitors. Great deal of household debris and rubbish on and around the area. Would need to be cleaned up and kept clear for tourism to take place.
Ecological setting	
How to prevent damage to site	No damage

Appendix 5.7- Feletoa Fortress, Vava’u Island	
Assist access, e.g. clearance of understorey	Some clearance of understorey on western side and some extension or widening out of fenced area on eastern side.
Vegetation and ecological management	
Tracks	
Layout and design	<p>Approach to the site is by car from either Mataika Village or the airport. Alternatively the site could be approached on foot from a boat landing made at Tufutele Landing, or from Feletoa Landing.</p> <p>Two walking loops could be developed for the site.</p> <ol style="list-style-type: none"> 1. Orientation could start at the school at the existing sign, or at the by two-tier langi southern side of the fortress. Visitors could park on the partly formed football field. Starting at the Langi of Ulukalala II, opposite the school sign, the loop could proceed around the eastern side, following the double ditch and bank to Langi Fale Ulu, adjacent to the modern cemetery on the roadside. Crossing the main road, the walk could then approach the baobab tree called the ‘Prison tree’, and then turn north to the sinkhole and well. Follow the Hala Mate and return to the departure point. Would take 20 minutes. 2. Second tour could begin at Mataika Landing, walk up the road to Mataika Village (which needs substantial clean up before tourism could occur) or turn north along the shore line to Feletoa landing and approach the circuit in reverse (Hala Mate, sinkhole and well, prison tree, Langi Fale Ulu the easily visible double ditch and bank then to Langi of Ulukalala II, and descend to the Landing by Turi road west of Mataika Village, then turning off to the sea.) Time – would take 40 minutes.
Allow appreciation of site	Coral graveled and maintained tracks through the ditch and to the various point of interest. Raised steps to a viewing platform above the ditch and bank might extend appreciation of the features without walking in them.
Safety	Easy walking on comparatively flat terrain. Easy slopes on roads. However sinkhole might need barriers or handrails/ steps to descend without slipping.
Prevent damage to site	Raised steps to a viewing platform above the ditch and bank would prevent damage to the ditch and bank
Re-design needed?	Layout and design need improvement. Routes for guided walk loops need to be established on the east and west side and also on the west at the north and south entrances by the main road, as well as from the Mataika Landing
Other infrastructure (access, activities, accommodation, attractions, amenities)	Removal of rubbish is essential, and prevention of more accumulating
Roads	Current roads are adequate
Shelter	Yes, several house on the site since it is an urban area. But none suitable for tourism. They are domestic dwellings
Toilets	Possibly
Jetties/wharf/haul-out areas	Existing at Mataika village, Tufutele Landing
Assembly and orientation areas	Yes, by school or at the two-tier langi at the southern road entrance to site area.
Signs and sign adequacy	Orientation and information signs. “You are here” signs on plan of defences at selected spots.

Appendix 5.7- Feletoa Fortress, Vava'u Island	
Pamphlets or other interpretation literature	Yes, a pamphlet, new plan, short history and an imagined perspective view would be good.
Visitor satisfaction surveys	Yes
Training of guides	Yes
See also Excel spreadsheet for existing and future costs	Appendix 10.7
What is being done at the sites now	No action at present
What is hoped for in the future	<ol style="list-style-type: none"> 1. Discuss these matters with elders who know more about these sites, for instance, Feletoa and its name. We need to take photos and archive these. 2. Identify the cemetery known as Feki-Tetele. We only heard stories through the fanongonongo tokoto (stories being told through word of mouth from elders to younger members of the extended family). Tu'inavou (Secretary of the Tonga Traditions Committee. He currently holds the title Hon Lord Vaea and is the Minister for Agriculture, Fisheries and Environment) came to Feletoa twice to look and the fortress and find out information from us.
Issues (positives and negatives) for long term community maintenance and management for the sites	<ol style="list-style-type: none"> 3. Conflicting uses – habitation and possibly tourism 4. Ownership and decision-making – one main owner but may be many tax allotments

References

- Johansson Fua, S., Tuita, T., Kanongata'a, S. L., & Fuko, K. (2011). *Cultural Mapping, Planning and Policy: Tonga*. Nuku'alofa, Tongatapu, Tonga: Secretariat of the Pacific Community on behalf of the Ministry of Education, Women's Affairs and Culture, Government of Tonga.
- McKern, W. C. (1929). *Archaeology of Tonga*. Honolulu: Bernice P. Bishop Museum.
- Vava'u Community Meeting #1. (2012). Vava'u Community Meeting #1. Held 11th January at the Governor's Office, Neiafu, Vava'u.

Appendix 5.8 - Uoleva Island, Ha'apai

BASIC DATA	See Figure 26, 27, and 28, Volume I
Site name	Uoleva Island pigeon snaring mounds (Sia heu lupe).
Supporting village name	Hihifo Village. Most people who have bush allotments on the island are from Hihifo Village (pers comm. Sakopo Lolohea 15/01/12) – Tomasi and Soni Kaifoto (Captain Cook's Landing Resort) are from Hihifo, Finau Uoata is both from Panagai and Hihifo.
Location	
Lat and long	
Address and/or other location details	South of Lifuka Island across a channel. Sandbar used to be passable on horseback at low tide, until earthquake in 2008 split the coral shelf (pers comm. Sakopo Lolohea 15/01/12) and sea level rise means the sandbar is rarely fully exposed.
Distance in km from supporting/nearest villages	2 km
What is the site interest	The 6 sia heu lupe pigeon netting mounds are spectacular monumental architectures. Each mound has almost the same dimensions, symmetrical mounds and ramps, positioned in almost identical orientations. Note: Originally in a forested area. Mounds had to be on the fringe of natural bush so that birds could approach the mound, to be snared at the same height as the mound (pers comm. Sakopo Lolohea, 15/01/12). Uoleva is the first island that Captain Cook planted watermelon. Uoleva has a very safe landing place.
What makes the site unique?	A remarkable group of 6-10 pigeon snaring mounds, the rock lined examples are rare in Tonga and the Pacific.
What makes the village unique	
Cultural constraints on visiting	No, but area has been divided into tax allotments for many years.
Wider setting of site	A long atoll landform with a fringing reef to west and east. Largely uninhabited (3 resorts, 1 intact house and a few unused house areas)
Site description (brief)	
Terrain description	Flat, long island with some evidence of beach ridges and swales.
Plan	Map with mounds located. Drawings of individual mounds. Figure 28, Volume I
Key photo(s)	Figures 26 and 27, Volume I
Relationship to other sites (Cultural and physical)	The royal island of Uiha lies to the southeast, adjacent to the uninhabited island of Tatafa. Diana Resort Kalafi Osai (from 2000) Captain Cook Resort Sone Kaifoto (from 1992) Serenity Beach Resort Patti (American) & Semi (from 2011)
EXISTING CONDITIONS	
Site condition	Island is largely relict coconut graves with much foraging of pigs on the fallen coconuts. Forest is mainly composed of fa and to'i, fa'u and puko forming a treeland in places. Areas of former grazing and burning. Former coconut plantations post 1900 (pers comm. Sakopo Lolohea, 15/1/12) evidence of copra drying pits. The last copra was exported in 1978.

Appendix 5.8 - Uoleva Island, Ha'apai

Heritage features	<p>The island is notable for its assemblage of 6 -10 sia hue lupe, pigeon snaring mounds. The location of these is poorly mapped but we were able to locate important examples in the far southwest, the far north and the centre.</p> <p>The pigeon snaring mounds are between 3 to 10 metres above the surrounding ground. They form a truncated cone with the tops 25 m in diameter with a central depression about 5 m across. Some mounds and surviving pits are lined with large coral slabs and stones. The base of the mounds are surrounded by an area of level ground about 16 m wide, beyond which are sand quarries, typically large elongated pits which provided the large quantities of sand needed to create the mounds. The mounds usually have ramped causeways which allowed for carrying of sand to the top and ultimately a means of access to the upper surface for pigeon snaring.</p> <p>The mounds visited in January 2012 were:</p> <ol style="list-style-type: none"> 1. Southern sia (Sia Toloke), 2. Central sia (new record - Sia 'no-name'), (Sia Ulu Fotu) 3. Northern sia(un-named low slab-lined mound) (new record - un-named sandy mound with house on it, seen in 2008) (Menziess, 2009)
Vegetation cover	Forest is mainly composed of fa'a and to'i, fa'u and puko forming a treeland in places. Areas of former grazing and burning. Former coconut plantations post-1900.
Structures on the site	None – no toilets, fences etc. Resorts on the island provide the infrastructure.
Condition and uses	N/A
Access to site (roads, foot track, within/adjacent to village, sea, beach)	Poorly developed. Some rudimentary tracks in places. Track from the catamaran where we landed, as well as an unmarked track from Captain Cook Resort. Given the fringing reef and the prevailing winds, access from Lifuka Island is to the west coast of the island. Good landing to the south for Serenity Beach. No distinct track to the southern- most mound.
Current tourism	
Who comes	Limited use. Friendly Island Kayaks Company (Vava'u), Serenity Beach and Captain Cook take guests. Not a significant part of day-visit itineraries at present. Identified in The Lonely Planet Guide as "16th-century burial mounds at the centre are difficult to find without a guide" http://www.lonelyplanet.com/tonga/haapai-group/uoleva#ixzz1nuBjUZD9 .
Where from	New Zealanders, Australian. Young single backpackers, go to Captain Cook as well as Diana's. Serenity Beach is a 2-3 star boutique resort.
Why come	Backpackers. Peace and quiet, go 'native', come to lie on the beach.
When	July to September
Current Income	Negligible. Low and seasonal.
From tourism and other sources at the site	Indirect income. Things to do when stay at resorts. Not known if guiding is charged-for.
Management issues	<p>Need to increase the interest in this remarkable resource. However, the tallest mound's stone slabs are bedded in sand that is easily damaged by people climbing up the side. Only the southern-most mound (Sia Toloke) has an easy walking gradient on stone-lined surfaced causeway that does not damage the mound.</p> <p>Need service transport to the island and guiding. Training needed for</p>

Appendix 5.8 - Uoleva Island, Ha'apai

	<p>the guides. Some mounds are being damaged by pig rooting and suffering erosion. Reserve status needs to be reviewed. See below. Pigs have unimpeded access. Pig rooting through fallen coconut trees and the soil is causing long term deterioration.</p> <p>Need to maintain vegetation cover by planting longer-lived trees. A thick canopy would lessen the risk of erosion. The issue of fencing needs to be considered to prevent pigs and cattle.</p> <p>Issue of stabilisation and preservation of the sites needs to be addressed. Deliberate intervention to stabilise site condition would be warranted for the northern most mound, southern most mound (Sia Toloke), and the central tall mound (Sia Ulu Fotu) which are in excellent condition and would be damaged with use.</p> <p>Reserve needed at northern end and at the southern end of the island to protect the sites</p>
Community aspirations	Increase tourism numbers to resorts. Run boat access tours to these attractions. Used as supplementary activity for whale watching tours if weather is poor.
Is area of site fully protected and surveyed?	no
Is site fully within reserve area	no
What is tenure, reserve classification	Tax allotments. One may be on Royal land
Does tenure suit protection and tourist visitation?	no
Owners	<p>Live on Lifuka Island or migrated overseas or to Nukualofa</p> <ol style="list-style-type: none"> 1. Southern sia (Sia Toloke) - do not know landowner name 2. Central sia (new record is Sia 'no-name, but could be Sia Maka from McKern - do not know landowner name), (Sia Ulu Fotu – Royal Land) 3. Northern sia (un-named low slab-lined mound) (new record - un-named sandy mound with house on it, seen in 2008) (Menzie's, 2009). Do not know landowners names.
Other uses (graves, fruit gathering, grazing)	Modest cattle grazing but the island is used as breeding ground for farmed pigs
Uses conflict with tourism?	To some extent. Two mounds have been used as platforms for residences in recent decades
Restrictions on use	no
Fencing installed, if needed?	no
Hazards	
Physical risks	Stumbling on rough ground. Potentially unsafe boat access to the island depending on conditions. Boats without lifejackets.
Climate / climate change risks	All the coastal located mounds appear to be at risk for a further 20 to 50 metres of coastal erosion. Storm surges.
Habitation Risks (farm stock, people living on /near the site, invasive species)	Cattle grazing keep the brush down. Houses on 2 of the sites. People who live there only go to look after plantation.
Currently how reduced or mitigated?	N/A
Ecological setting	Relict coconut plantation with interesting forest succession of fa and

Appendix 5.8 - Uoleva Island, Ha'apai

	to'i, fa'u and puko. Some fruit trees such as citrus (oranges, limes) and guava, and cycads. Are some areas where there have been cattle is a fern called fue. Asparagus fern which is a weed. Coconut crabs burrow into the mounds and weaken them, as do pigs clambering on the mounds.
Causing damage to site	Coconuts are rooted up by pigs, causing erosion
Assists or impedes access	Uneven roots, plentiful coconuts and fallen trees makes walking difficult
Assists or impedes appreciation of site	The sites can been seen in the forest cover but reduction of pigs rooting would lead to rapid growth of ground level and new forest seedlings which would cover and obscure the tops of the mounds. See below.
Any protected or high-value species, specimen or shelter trees?	No. Toi is now very rare (hardly any on main islands.) Cycads are now well worth conserving.
If problematic, how to fix?	Conservation – fencing needs to be considered.
Tracks within site area	
State of tracks	nil
Layout and design adequate?	nil
Allow appreciation of site	
Safe	
Causing damage to site	
Need re-design?	
Other infrastructure Perhaps in supporting village, how far (km), condition?	Nil onsite apart from facilities in the few resorts on the island
Shelter	
Toilets	
Assembly and orientation areas	
Signs and sign adequacy	
Attractions	
Accommodation	
Amenities (toilets)	
Activities (on or near the site, eg. Festivals)	
Carrying capacity	
Current usage (visitor no.s per day, per annum)	0-10 per year. School trips used to go to the 2 unnamed mounds at the northern end but no longer visit as a result of channel changing (causeway not safe).
Capacity with current infrastructure	No more than 5 people week, per annum. No more than 250 per site per year. Stone- lined ramp at Sia Toloke could be used more. The tall mound should not be climbed. Viewed only from a distance.
Free visits / guided / admission	
Group sizes and frequency of visitation	Groups of 5 or 6 twice a week (small boatful). Cruise ship volumes would not be possible unless infrastructure such as walkways were installed. The banks are the problem for the Sia Ulu Fote. Easily dealt with by wooden steps.
Visitors' perceptions of crowding	

Appendix 5.8 - Uoleva Island, Ha'apai

FUTURE MANAGEMENT OPTIONS	
Improve protection and survey	Establish reserve status for northern and southern mounds. Undertake conservation and mapping assessment to verify where all the sia are located. Install fencing, steps alongside but not on the mounds, interpretation signage, guide maps. Protect Sia Toloke (bottom one) and the 2 middle ones, Sia Ulu Fotu and Sia 'no-name' by fencing and change of status from private to reserves land.
Potentials	
Community support potential	Some may – resist turning into a reserve (normal practice is that if turn into a reserve, allotment owners are paid cash or a land swap is arranged). Some may be supportive, others not.
Income potentials	Low to medium – tour guiding. Extension of tours from Lifuka to Uiha, add to whale watching and kayaking tours.
Other (government, NGO, etc)	Strong support from TVB and local tourism community, the Ha'apai Tourism Association.
Future tourism potential	
Future site capacity (if improvements made)	
Ecological setting	
How to prevent damage to site	Fencing, limit numbers of visitors and pigs. Cut down coconut trees on the mounds and replace with canopy trees.
Assist access, e.g. clearance of understorey	Clearance of routes. Identify key entry points and tracks to the site e.g. the existing resorts (toilets, food shelter), catamaran road to fence (and inland). Sia Toloke near Serenity Beach, Sia Ulu Fotu near Captain Cooks. Northern mounds are risky to access – the beach landing is not easy.
Vegetation and ecological management	Removal of coconuts and encourage new canopy plants / treeland from the mounds so that weeds do not grow up underneath. Trim back the fa'u. In the interim cut down the coconut palms off the tops of the mounds. They are very vulnerable to wind and damage the site when fall. Fencing of mound areas or the tax allotment.
Tracks	
Layout and design	Needs through analysis, design and installation in light of pattern of resorts and access to the island. As well as need to identify which are the desirable mounds for visitation –we suggest 3 only. Sia Toloke (bottom one) and the 2 middle ones, Sia Ulu Fotu and Sia 'no-name'. Exclude the northern ones from tourism because boat landing is difficult.
Allow appreciation of site	Better foot access. Depends on tax allotment boundary and choice of desired sites
Safety	Tracks and steps on the site would improve safety
Prevent damage to site	Step ways up to tall sites and boardwalks on sandy causeways.
Re-design needed?	yes
Other infrastructure (access, activities, accommodation, attractions, amenities)	Public access to resorts, training of guides about the value of the sites. However there is a question about whether resorts provide access to people who are not their guests unless some form of payment for

Appendix 5.8 - Uoleva Island, Ha'apai

	services (toilets, food, guiding) is made.
Roads	no
Shelter	no
Toilets	no
Jetties/wharf/haul-out areas	Not practical on Uoleva because of coastal erosion
Assembly and orientation areas	Access to the island will need to be by boat
Signs and sign adequacy	Signs on the sites, assume guides and VFR, signage at beach frontage (means reserves for signs). Once legally agreed reserves and track ways have been agreed then signage and map locations will be essential.
Pamphlets or other interpretation literature	Yes – for TVB. Drawings of reconstructed use. Produce brochures and signage.
Visitor satisfaction surveys	Yes in future
Training of guides	<p>Train guides about the mounds as one of the 10 things you 'must do' in Ha'apai</p> <ol style="list-style-type: none"> 1. Whale watching using the season 2. Explore the pigeon mounds of Uoleva 3. Uiha where the first parliament was held 4. Visit the lake and volcano island of Tofua 5. Visit the rock at Motofonua Resort 6. Fort at Velata, the turning point in creation of the modern Tonga 7. Visit the Royal Palace 8. Dinner at the Sandy Beach resort 9. Visit Shirley Baker 10. Visit the Port au Prince
See also Excel spreadsheet for existing and future costs	Appendix 10.9
What is being done at the sites now	Nothing
What is hoped for in the future	<p>The problem with Uoleva is that who will maintain these sites (Ha'apai Community Meeting # 1, 2012)</p> <p>Visit Uoleva on the way to Uiha Island. There are several other sites that also could be developed and may be more important. These are: On Uiha Island - the Makahokovalu, Mala'elahi, Vai-ko-Tafetafe</p>
Issues (positives and negatives) for long term community maintenance and management for the sites	<ol style="list-style-type: none"> a. Ownership - Uoleva is also owned by various landlords such as the king, private owners, and government, whereas Uiha, you are dealing only with Malupo. Need to identify who owns which land the sia are on. A proper survey of where the sia are located and a site register is needed. b. Development and operations - Who would be responsible for looking after the individual sites? Allow the owner to be able to get the revenue for an on-going budget to operate the business every year sites (Ha'apai Community Meeting # 1, 2012) c. Management and maintenance - The meeting (TVB, Governor Secretariat, land owner, district officer and the aid agency) that decided who will be responsible for the site caring, with training

Appendix 5.8 - Uoleva Island, Ha'apai

about benefits, how to maintain and funding from the government, Town officer and the Tourist officer depends who owns the site. It must be the community and the owners who decide what is to happen. District Officer could meet with landowners to encourage them to look after the sia and clean up the land. (Ha'apai Community Meeting # 2, 2012).

References

- Ha'apai Community Meeting # 1. (2012). Ha'apai Community Meeting # 1. Held on 13th January at USP Ha'apai Campus, Pangai, Ha'apai.
- Ha'apai Community Meeting # 2. (2012). Ha'apai Community Meeting # 2. Held on 16th January at USP Ha'apai Campus, Pangai, Ha'apai.
- Menzies, I. (2009). *Interpreting Tonga for Cultural Tourism: Some Guidelines for a National Interpretive Strategy*. Nuku'alofa, Tonga: Australian Youth Ambassador for Development, AusAID.

Appendix 6 List of community meetings

Meeting	Participants	Team members
Vaini Community Meeting #1. Vaini Village, Tongatapu. 26 th October, 2011	Vaini Community – Town officer, Mrs Amelia Ma’afu, Hafangalupe Development Committee. Hufangalupe Community Council.	Dr ‘Ana Koloto (meeting chair)
Niutoua Community Meeting, Niutoua Village, Tongatapu. 24 th November 2011	Niutoua Community - Town Officer of Niutoua. Nine people were gathered by the Town Officer to represent the community, mostly belonging to the two active groups in the village – The Women’s Group and the Youth Group – that form the Community Council which looks after development activities in the village.	Dr Masasso Paunga (meeting chair)
‘Eua Community Meeting – Molipeli Conference Room, Ministry of Agriculture, 10 th January, 2012	‘Eua Community - Lolo Fili (Acting Government Rep.), Melenaita Lolo, Ului Latu (Government Rep. Office), Fakalolo Tu’ivai, Kesaia Tameifuna, Taki Hausia (Eua Eco-Tourism Association), Sioli Mo’unga, Taiua Taufalele, Lose, Fakakiko Falemaka, Asaeli Loni (Deep Resort), Fosita Masi (Treasury), Sitaleki (TV/Radio News Reporter), Vainga Tonga (Businessman), Fine’eva Topui, Temalisi Maile, Kisione Pakalani (Arts of ‘Eua), Kalisi Pakilani (Treasurer Eco-Tourism Association) Sipola Pakalani (Arts of ‘Eua), Tuifua Finau (District Officer), Siua Ta’u (Town Officer), Siupeli Vaiangina, Tevita Pakalolo.	Dr ‘Ana Koloto (meeting chair), Dr Massaso Paunga, Dr Jenny Cave, Mr Kevin Jones
Vava’u Community Meeting #1. Governor’s Office, Neiafu, 11 th January 2012	Puluno Toke (TVB), Siketi Mailangi (Feletoa), Feletoa Town Officer, Tu’anekeviale Town Officer, Leimatu’a District Officer, Tu’anekeviale District Officer, Haniteli Fa’anunu, Lucy Fa’anunu (Ene’io Enterprises)	Dr ‘Ana Koloto (meeting chair), Dr Massaso Paunga, Dr Jenny Cave, Mr Kevin Jones
Vava’u Community Meeting #1. Governor’s Office, Neiafu, 11 th January 2012	Puluno Toke (TVB), Siketi Mailangi (Feletoa), Feletoa Town Officer, Tu’anekeviale Town Officer, Leimatu’a District Officer, Tu’anekeviale District Officer, Haniteli Fa’anunu, Lucy Fa’anunu (Ene’io Enterprises)	Dr ‘Ana Koloto (meeting chair), Dr Massaso Paunga, Dr Jenny Cave, Mr Kevin Jones
Vava’u Community Meeting # 2. Ene’io Gardens Visitor Centre, 13 th January 2012	Haniteli and Lucy Fa’anunu (Ene’io Enterprises), Seketi Mailangi (Feletoa Village), Puluno Toke (TVB).	Dr Massaso Paunga (meeting chair), Kevin Jones
Ha’apai Community Meeting #1. USP Ha’apai Centre, Pangai. 13 th January, 2012	Ha’apai Community - Pita Vi (District Officer, Pangai), Kepu (Secretary for The Governor & Haapai Tourism Association, Kato Kakala (woman, TVB Ha’apai), Moimoi Fakahau (Town Officer, Pangai, News Reporter) Finau Uata, President of HTA, Businessman – owner of Lindsay Guest House and Bakery, Fifita Vi (Owner of Fifita Guest House), Evaloni Guesthouse Rep.	Dr Jenny Cave, Dr ‘Ana Koloto (meeting chair), Mr Kevin Jones, Talei ‘Ulufonua (record keeper)
Ha’apai Community Meeting #2. USP Ha’apai Centre, Pangai. 16 th January, 2012	Ha’apai Community - Finau Uata (Reverend, Ha’apai Tourism Association, Lindsay Guest House and bakery owner), Moimoi Fakahua (Town officer, Pangai), Pita Vi (District Officer, Pangai), Kepu ‘Ioane (Governors Secretariat), Sailosi ‘Alofi (Manager of Ha’apai Ministries of Fisheries), Fifita Vi (Owner of Fifita Guest House), Kato Langi (TVB)	Dr. Jenny Cave (meeting chair), Mr Kevin Jones. Talei ‘Ulufonua (record keeper)

Appendix 7 Key contacts and meetings

Ministry of Tourism

Mr Paul Davis
Mr Sakopo Lolohea
Mr Isileli Aholelei
Ms 'Akosita Tu'ihalamaka
Ms Teisa Fifita

Ministry of Lands

Lord Ma'afu, Minister for Lands, Kingdom of Tonga
Mr Makameone Fifita
Mr Richard Kautoke

Hufangalupe – (Vaini Village)

Lord Ma'afu, Estate Holder of Vaini
The Right Honorable Sione Taione, MP for Vaini
Officer Pasi Ma'ako, Town Officer for Vaini
Mrs Amelia Ma'afu
Hufangalupe Community Council
Hufangalupe Development Group

Ha'amonga - (Nuitoua Village)

Makafeo Faiga'a, Talking Chief and President of Wesleyan Church
Officer Tolu, Town Officer for Niutoua
Community Council (Women's Council and Youth Group)

Ministry of Education, Women's Affairs and Culture

Dr Pulpaki Ika

World Bank

Mr Lai Tora

Tongan Bureau of Enterprise Centre

Mr John Cvecto

Tongatapu Museum

Dr Wendy Pond
Ms Asena Helu

Australian National University, Australia

Professor Geoff Clark, Department of Archaeology, Canberra

Department of Conservation, New Zealand

Ms Annie Wheeler, Senior Advisor International, Department of Conservation -Te Papa
Atawhai, Wellington, New Zealand

Member of Parliament for 'Eua

The Right Honorable Sunia Fili, MP for 'Eua

Appendix 8. Assessments of Site Feasibility by Market Appeal, Robustness and Stakeholder Readiness

<i>Appendix 8.1 - Ha'amonga a Maui Feasibility</i>	
MARKET APPEAL	
Market potential	High potential. Mass tourism, group tours, heritage tourism. Domestic Tongan, VFR, international.
Potential experiences	<ol style="list-style-type: none"> 1. New car parking and entrance kiosk (eastern side) 2. Enhanced onsite circulation 3. Ha'amonga a Maui (Gateway) 4. Sightlines from Uasi la'aa (the 'watch') 5. Paepae 6. Coastal walk 7. Langi Heketa 8. Makafakinainga 9. Enhanced village activities on site: market stalls for crafts of Nuioua Village, local specialty foods, seasonal produce, wild fruits, medicinal plants, performance (school), tour guiding
Future activities	Moderate level of tourism capacity. Estimate of 20,000 visitor capacity. Guided visits for cultural information and safety reasons.
Future facilities	Car park, shelter, tracks, viewing platforms. Recreation and leisure at beach. Picnic area. Interpretation signage. Guide training. Maps. Independent and guided visits. Prefer guided use because of cultural information and safety concerns. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Moderately easy to achieve. Fence to keep out pigs. Prohibit cars on the site.
Risk	Low risk.
Professional advice	Conservation plan for preservation of these very important heritage structures.
Current activities	High level of tourism at this site. Estimate of 20,000 per annum at current level.
Current facilities	Some, but very basic
STAKEHOLDER READINESS	
Village	Niutoua Village. Village eager to see change. Want more planning input and ability to take action.
Company	Tour operators. Market stallholders
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). Lands and Survey owns the land (Reserve). Manages site maintenance.
NZ MFAT	Currently NZ MFAT has invested in signage at roadside. Propose \$ 129,700 NZD, invested in enhanced facilities. Car park \$ 40 K NZD
Management issues	Consider DOC style ranger service. Conservation management plan. Work closely with Niutoua Village Community Council to consider revenue options, implications and management / operational regimes. Issue of distribution amongst community or earned income solely to entrepreneurs. Sight lines appear not to be fully within the reserve area. Hazards - traffic management. Guide training. Cleanliness and maintenance of site. On-going repair of facilities. Parking capacity is limited by available land. Encourage school on site to do guiding, performance and record oral history. Easy vehicle access from sealed road with two-way capacity. Community and commercial project.

Appendix 8.2 - 'Ene'io Beach Walkway/ Lookout Feasibility

MARKET APPEAL	
Market potential	Moderate to high, if cruise ship tours visit.
Potential experiences	1. Walkway and steps to lookout above beach. 2. Lookout platform on point. Bird watching. 3. Additional toilets and water tank. 4. In Phase II, link to a unguided and guided walk to Matamahina viewing area, entrance adjacent to the 'Ene'io Beach Gardens
Future activities	Moderate to high potential. 'Ene'io Beach could accommodate 5 - 10,000 per annum, but need to limit numbers to the point to 5,000 per year.
Future facilities	Improve track safety. Add water tanks and toilets. Interpretation signage. Guide training. Brochure, map. Walkways, platforms, barriers and new road. Plan with Matamahina as one site. Prefer guided use because of safety concerns at cliff edge. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Moderate, hard to achieve. Extensive area.
Risk	Moderate risk. Walking on uneven ground. Cliffs.
Professional advice	Cliff safety on the point
Current activities	Moderate. Local use. Some tourist visitors. 2-4,000 visitors per annum at Eneio Beach.
Current facilities	Rudimentary fences.
STAKEHOLDER READINESS	
Village	Supported by Tu'anekevile Village. Employment, sale of horticultural produce.
Company	'Ene'io Enterprises for visitor centre and walkway.
Tongan Government	Tourism promotion (Tourism Visitor Bureau). Lease of Land – Ministry for the Environment.
NZ MFAT	No investment at present – propose \$ 80 K NZD to enhance the site. Matamahina - none at present – propose \$ 30 K NZD to develop site. Total of \$110K NZD
Management issues	Develop 'Ene'io tracks / lookout east of the beach and Matamahina as one site. 'Ene'io Gardens at end of formed but unsealed road wide enough for two-way traffic. Tourist access to Vava'u is limited by flight and cruise boat schedule but high numbers of yacht arrivals. Commercial project.

Appendix 8.3 - Li'angahuo a Maui Lookout Feasibility

MARKET APPEAL	
Market potential	Moderate - VFR and domestic Tongan, Eco-tourists.
Potential experiences	<ol style="list-style-type: none"> 1. Scenic drive from 'Eua villages. 2. Visit subsistence horticulture garden. 3. Drive to car park/ orientation area. 4. Walk past 'rock garden' and turtle viewing. 5. Walk along cliff to route to Li'angahuo a Maui Lookout platform. 6. Do not visit archway cliff top unless guided. 7. Return to vehicle.
Future activities	Moderate potential for both sites. Approximately 2000 per year (future estimate), small groups, guided tours or backpacker trekkers.
Future facilities	Access Li'angahuo a Maui via Lakufa'anga. Plan as one site not two. Develop Lakufa'anga in Phase II. Car park, shelter, orientation, platform, track and safety measures. Prefer guided use because of safety concerns. Both sites need brochure, map, interpretation signage. Guide training. Track and new bolts for platform and continued maintenance/ renewal of structures/signs needed at Li'angahuo a Maui
ROBUSTNESS	
Conservation needs	Easy to conserve. Improve access walkway at Li'angahuo a Maui.
Risk	Risk is moderate at the Li'angahuo a Maui platform, but very high at the natural archway. Do not visit the natural archway unless guided
Professional Advice	Cliff stability and personal safety at both sites. Geo-engineer needed. Advice on tracks, platform design and safety. Advice on track improvements needed for Li'angahuo a Maui.
Current activities	Low. Approximately 1000 per year (estimate), at both sites.
Current Facilities	None. NZ MFAT road is the only access. Access to Li'angahuo a Maui. NZ Platform is 300m from the Lakufa'anga turtle viewing area along a walking route from the informal road. No track infrastructure but route marked by cotton ribbons (Eua Eco-tourism Association)
STAKEHOLDER READINESS	
Village	'Eua Council. Island community project. No specific supporting village.
Company	'Eua guest houses. Tour operators. Eco-tourism Association. Mileama family garden tour at gate.
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). National Park, leased land.
NZ MFAT	Proposed development investment for Li'angahuo a Maui of \$24,250 NZD to supplement the current NZ MFAT platform.
Management issues	Consider DOC style ranger service. Keep cattle and horse grazing to subdue shrub growth - site visibility. Tourist access to 'Eua is limited by flight and cruise boat schedule. Site arrivals by car, distant from centres of population. No safe boat landing. Community project, with youth and churches

Appendix 8.4 - Lauua Lookout and Fortress Feasibility

MARKET APPEAL	
Market potential	Moderate. Eco-tourists. VFR and domestic Tongan. Current, mountain bike and horse trekkers. Vehicle access dependant on forestry company road.
Potential experiences	1. Walk or drive through forestry land from gate 2. Walk up track to limestone outcrop and steps ('first defence') 3. Walk down slope to ditch and bank. 4. Overlook the cliff at Lauua Lookout 5. Fort interior. 6. Return to access road. 7. Drive / walk to Lokupo Lookout and Rat Cave
Future activities	Moderate. Approximately 500 per year (estimate). Mixed – some freedom walkers, some guided tours, access on foot. Small group tours, in pairs or groups of 5 (1 guide, 4 vehicle passengers). 50 people a day, maximum. If Tonga Forest Products invest in the road, visitor numbers could treble to 1500 with good vehicle access.
Future facilities	Fort track, steps and ropes. Interpretation signage. Prefer guided use. Guide training. Brochure, map. Independent and guided visits. Add Lokupo Lookout to map. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Easy to achieve. Fence, walkways. Remove invasive species. Encourage canopy trees.
Risk	High. Bolts removed from platform. Must be replaced.
Professional advice	Cliff and platform stability. Engineer survey needed. Advice on new track. Cultural / historical mapping.
Current activities	Low. Approximately 200 per year (estimate), small groups, guided tours or backpacker trekkers, self-guided hand-drawn maps. 'Eua Ecotourism Association clears vegetation at Lookouts. Tonga Forest Products needs to control access over its land. Register at HQ - safety concerns and damage to forestry road.
Current facilities	NZ MFAT -funded platform. No track infrastructure but route is marked by cotton ribbons, replaced by 'Eua Eco-tourism Association.
STAKEHOLDER READINESS	
Village	'Eua Council. Island community project. No specific supporting village.
Companies	Tonga Forest Ltd. 'Eua guest houses. Tour operators. Eco-tourism Association.
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). Tongan Government - owns National Park land.
NZ MFAT	Current – have built lookout platform at Lauua and Lokupu. Future proposal \$116,300 investment to develop the fortress interpretation.
Management issues	Consult geotechnical engineer for platform and cliff safety. At present 'Eua Eco-tourism Association is very active and Tonga Forest Products willing to develop the road. Stainless bolts needed to be re-placed to make platform safe. Tonga Forest Products - interest in road improvement (fee access to visitors), camping facilities, safety of public users, possibly routine maintenance of platform. Site arrivals on foot or by 4WD. Must cross TFP land to access. If TFP invest in the road, visitor numbers could treble with good vehicle access. Community project.

Appendix 8.5 - Velata Fortress Feasibility

MARKET APPEAL

Market potential	Moderate. Eco-tourists. VFR and domestic Tongan.
Potential experiences	Develop two new visitor experiences, one at the existing entrance area and the other on the eastern side of the site skirted by an ancient road curves around the ditch and bank. Experiences could be: <ol style="list-style-type: none"> 1. Orientation to the history of the site at the western side, near the existing car park. 2. Track and steps over the ditch and bank. 3. Steps up to mound which could be a sia, the stone lined causeway and pits for sand. 4. Walk or cycle to the second interpretation post at the eastern side of the fortress. 5. Signage to tell the story of the fortress gate (yet to be located). 6. Develop orientation signage and car parking. 7. Traverse the ditch and bank using steps. 8. Walk or cycle the ancient road to the coast and the site of the early village 9. Loop back to Pangai.
Future activities	Moderate potential. Up to 1000 visitors per year, to both sides of the site
Future facilities	Car parks x 2, tracks, board walks, steps. Interpretation signage. Independent and guided visits. Guide training. Brochure, map. Continued maintenance and facility renewal needed.

ROBUSTNESS

Conservation needs	Moderate - hard to achieve
Risk	Low
Professional advice	Cultural mapping. Conservation plan. Historical research. Accurate mapping
Current activities	Low. Perhaps 300 per annum because overall tourism numbers to Ha'apai are low. The current physical carrying capacity of the site however is higher, perhaps around 1000 per annum if promotion and signage were increased.
Current facilities	Parking and signs, hand-painted and sign on plinth in protected fencing.

STAKEHOLDER ACCORD

Village	Hu'o otu Village, Lifuka Island. Two primary landowners.
Company	Guest houses. Landowner interest in business development
Tongan Government	Promotion of tourism (Tourism Visitor Bureau)
NZ MFAT	Investment proposed of \$80,000 NZD
Management issues	Consider DOC style ranger service. Undertake as community project youth churches, cultural centre or site development. Develop two access points to experience the site. Velata Fort is accessible by two-way traffic, unsealed deeply potholed road. Tourist access to Ha'apai is limited by flights and ferry. Community project.

Appendix 8.6 - Hufangalupe Feasibility	
MARKET APPEAL	
Market potential	Moderate potential. Mass tourism, group tours, eco-tourism. Domestic Tongan, VFR, international. Bird watching.
Potential experiences	<ol style="list-style-type: none"> 1. Entrance - access from existing road 2. Sheltered car / bus parking at the end of the access road. 3. Toilets and Café. 4. Beach lookout and access. 5. Archway and sea cave. 6. Cliff top walk, birds wheeling overhead 7. Cave with sea doves. 8. Loop trail
Future activities	Moderate level of tourism capacity. Estimate of 2000 visitor capacity. Guided visits for safety reasons.
Future facilities	Carpark, shelter, tracks, viewing platforms. Recreation and leisure at beach. Picnic area. Interpretation signage needed. Guide training. Maps. Independent and guided visits. Prefer guided use because of safety concerns. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Easy to achieve. Block entrance and current informal roads from vehicles. Re-vegetate grassland. Form walkways.
Risk	High. Real risk to life at cliff edges. Unstable ground. High winds.
Professional advice	Cliff stability and personal safety. Geo-technical engineer needed. Design of roads, tracks and platforms.
Current activities	Estimate of 900 visitors per year. Low level of tourism. Used also for recreation, leisure and (on inland edge) horticulture activities.
Current facilities	None
STAKEHOLDER READINESS	
Village	High. Vaini Village. Lord Ma'afu oversees upkeep of the site and Vaini community cleanups
Company	Tour operators at present
Tongan Government	Ministry of Tourism - promotion of tourism on site. Land and Survey owns the land (Reserve).
NZ MFAT	Current investment nil, proposed investment \$167,850 NZD
Management issues	Fatal falls from the cliffs have occurred. Ownership of the road not clear. Easy vehicle access by road. Road now wide enough for two-way traffic and not sealed. Undertake as community project. Power and water need to be installed, as well as toilets, rubbish collection and on-site residential supervision. Community and commercial project. Consider a centralized DOC style ranger service for on-going maintenance of all Tongatapu heritage tourism sites.

Appendix 8.7 - Lakufa'anga Feasibility

MARKET APPEAL	
Market potential	Moderate - VFR and domestic Tongan, Eco-tourists.
Potential Experiences	<ol style="list-style-type: none"> 1. Scenic drive from 'Eua villages 2. Visit subsistence horticulture garden. 3. Drive to car park/ orientation area. 4. Walk through landforms to the coast. 5. Lookout over cliff 6. Maintain 'throw the fa' ritual 7. Then walk along cliff to route up to Li'angahuo a Maui Lookout platform. 8. Return to vehicle along cliff top.
Future Activities	Moderate potential for both sites. Approximately 2000 per year (estimate), small groups, guided tours or backpacker trekkers.
Future Facilities	Car park, shelter, orientation, platform, track and safety measures. Gate, stile access over fence at entrance. Prefer guided use because of safety concerns. Both sites need brochure, map, interpretation signage. Guide training.
ROBUSTNESS	
Conservation Needs	Easy to conserve. Fence, walkways, viewing platforms. Re-vegetate.
Risk	High. Real risk to life at cliff-edges at both sites. Unstable ground. High winds. Needs barriers at cliff edges.
Professional Advice	Cliff stability and personal safety at both sites. Geo-engineer needed. Advice on tracks, platform design and safety needed.
Current Activities	Low. Approximately 1000 per year (estimate), at both sites.
Current Facilities	None. NZ MFAT road is the only access. NZ MFAT Li'angahuo a Maui Platform is 300m from the Lakufa'anga turtle viewing area along a walking route from the informal road. No track infrastructure but route marked by cotton ribbons (Eua Eco-tourism Association)
STAKEHOLDER READINESS	
Village	'Eua Council. Island community project. No specific supporting village.
Company	'Eua guest houses. Tour operators. Eco-tourism Association. Mileama family garden tour at gate
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). National Park, leased land.
MFAT	Proposed development investment for Lakufa'anga of \$119,650
Management issues	Consider DOC style ranger service. Sustain rituals. Fatal falls from the cliff at Lakufa'anga have occurred. Keep cattle and horse grazing to subdue shrub growth - site visibility. Tourist access to 'Eua is limited by flight and cruise boat schedule. Site arrivals by car, distant from centres of population. No safe boat landing. Community project, with youth and churches

Appendix 8.8 - Feletoa Feasibility

MARKET APPEAL	
Market potential	Low to moderate
Potential experiences	<p>Either approach the site by road or water. If by road:</p> <ol style="list-style-type: none"> 1. arrive at Feletoa School and park on undeveloped football field 2. Orientation board at school. 3. Visit Langi of Ulukalala II. 4. Cross farmland to double ditch and bank. 5. Cross ditch and bank by raised steps and walkway. 6. Follow curve of the ditch for 400m. 7. Return over ditch and bank to Langi Fale ulu near modern cemetery 8. Cross road at Village Officer's house 9. Visit Prison Tree 10. Visit Sinkhole (climb down steps into sink hole) 11. Follow Hala Mate to Old Feletoa Landing 12. Walk along coastline to Mataika Landing 13. Walk up road towards Mataika village 14. Either return to southern ditch and bank to the two tier langi, or walk up road to car park on football field. <p>If by water, then start and end the loop at Mataika Landing.</p> <p>Could become the focus of an annual festival and community events.</p>
Future activities	Low to moderate. International, VFR and domestic tourists. Cruise visitors. 1500 per annum although has high potential carrying capacity.
Future facilities	Orientation, sign, track, stiles to cross fences, performances, demonstrations, interpretation signage. Guide training. Brochure, map. Independent and guided visits. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Moderate - hard to achieve. Conflicting uses -residential / farming /possible tourism.
Risk	Moderate. Walking on uneven ground. Several fences to cross. Sinkhole needs barrier. Wasps in vegetation in some parts. All risks can be mitigated.
Professional advice	Conservation plan. Cultural mapping. Track and interpretation design.
Current activities	Residential. Very low visitor use. Local school visits. No tourists. Perhaps 200 per annum.
Current facilities	None
STAKEHOLDER ACCORD	
Village	Feletoa Village. Town Officer house adjacent to site. Majority of site owned by one person, but multiple tax allotments and land owners. Mataika Village landing could be involved.
Company	None.
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). Possibly King's land.
MFAT	Proposed development investment of \$ 143,150 NZD.
Management issues	Consider DOC style ranger service. Modern village on an ancient village and fortification site – minor potential for conflicting uses that need to be managed. Retain grazing for visibility. Undeveloped, not known as a tourism attraction. Encourage school on site to do guiding, performance and record oral history. Establish who owns the land. Feletoa Village accessible by two-way traffic, sealed road. Tourist access to Vava'u is limited by flight and cruise boat schedule but high numbers of yacht arrivals. Community project.

Appendix 8.9 - The Matamahina Feasibility

MARKET APPEAL

Market potential	Low to moderate potential. Eco-tourists and locals. 2 km return walk. Moderate potential, if linked to 'Ene'io Beach walkway/ lookout.
Potential experiences	<ol style="list-style-type: none"> 1. Unguided and guided walk to Matamahina viewing area, entrance adjacent to the 'Ene'io Beach Gardens 2. Maintain ritual of night-time walk in silence 3. Ritual viewing and explanation of significance at cliff edge on lookout platform 4. Enhance with signage and visuals 5. Return walk
Future activities	Moderate potential. A night-time activity. Day time walk and scenic outlook. Limit numbers to Matamahina viewing area to 1000 per year.
Future facilities	Need safe track. Interpretation signage. Upgrade muddy stretches of road where streams cross. Can be unguided and guided use but prefer guided use because of safety concerns at cliff edge. Guide training. Brochure, map. Plan with 'Ene'io walkway as one site. Continued maintenance and renewal needed.

ROBUSTNESS

Conservation needs	The Matamahina has moderate conservation needs. Road easy, cliff top water scouring issue.
Risk	Moderate. Cliffs and steeply sloping ground
Professional advice	Cliff safety. Road design. Verify location. Cultural mapping.
Current activities	Locals visits to the Matamahina 100-200 a year. Low. Local use at dusk to watch the moonrise. 300 per annum.
Current facilities	The Matamahina has no fencing.

STAKEHOLDER READINESS

Village	The Matamahina supported by Tu'anekevile Village but visited by all of island. Employment, sale of horticultural produce. Matamahina not discussed at community meeting.
Company	'Ene'io Beach walkway/ lookout. 'Ene'io Enterprises for visitor centre and walkway. Matamahina-
Tongan Government	Promotion of tourism (Tourism Visitor Bureau). Land ownership is not known. Lands and Survey?
MFAT	There is no development at present of the Matamahina - propose \$ 30 K to develop the site
Management issues	Sustain ritual of "Moonlight experience". Daytime walking track. Link 'Ene'io tracks / lookout and Matamahina as one site. Establish who owns the access road and the 'Matamahina' land. Community project. Tourist access to Vava'u is limited by flight and cruise boat schedule but high numbers of yacht arrivals. Commercial project.

Appendix 8.10 - Uoleva Island Feasibility	
MARKET APPEAL	
Market potential	Low to moderate, if regular boat access. Eco-tourists. VFR and domestic Tongan.
Potential experiences	<ol style="list-style-type: none"> 1. Land by boat at Sia ulu fotu (near Captain Cook Resort). 2. Guided or unguided visit to the sia along signposted pathway. 3. Circuit the sia by boardwalks and steps up the mound. 4. Return to Captain Cook resort for refreshment, toilets. 5. Walk the beach westward to Serenity Beach Resort to visit Sia Toluke. 6. Guided or unguided visit to the sia along sign-posted pathway. 7. Return to beach for pickup and depart either to Uiha or to Lifuka.
Future activities	Low to moderate. Up to 100-200 per year to each site. 2 boatloads a week during high season (120 people) plus 2 per week from resorts (32). Total of 352.
Future facilities	Tracks to 2 sites. Signage, raised walkways. Prefer guided visits to preserve the sites. Guide training. Low impact tourists. Interpretation signage. Brochure, map. Continued maintenance and facility renewal needed.
ROBUSTNESS	
Conservation needs	Moderate - hard to achieve
Risk	Low risk for boat landing on west coast at the southern and central sia, unless bad weather or heavy swell
Professional advice	Accurate map of location. Signage. Conservation plan for the 2 recommended sites. Track work. Interpretive drawings.
Current activities	Low. Perhaps 50 per annum. The carrying capacities of the sites are higher if better promoted and transport access and track ways were added, perhaps up to over 350.
Current facilities	Resorts only, adjacent to some sites
STAKEHOLDER READINESS	
Village	Hihifo Village. Landowners - tax allotment holders, King Tupou.
Company	At present very few tour operators and whale watch activities use as supplementary activity. Resorts. Could provide toilets, food, 'gatekeeper' and guides.
Tongan Government	Promotion of tourism (Tourism Visitor Bureau)
MFAT	Propose investment of \$140,350 to develop and stabilize the sites
Management issues	Consider DOC style ranger service. Develop Sia Ulu Fotu (near Captain Cook Resort), Sia Toluke (near Serenity Beach). Boat access only. Risk - weather dependent boat landing. Tourist access to Ha'apai is limited by flights and ferry. Community project.

Appendix 9 Requirements for viability and benefits

	REQUIREMENTS FOR VIABILITY		BENEFITS	
	START UP	KEEP GOING	DIRECT	INDIRECT
Ha'amonga a Maui	<ul style="list-style-type: none"> Extend the reserve status for a new parking area and the 'watch sight lines' Involve village, community government and Noble in decisions Obtain funds to enhance the site infrastructure (MFAT) and develop the tourism experience Install power, water, waste management Improve parking Install way-finding signage from Nuku'alofa 	<ul style="list-style-type: none"> Governance and management structure On-going maintenance funded from income generated at the entrance gate Funds needed for staffing (admin, maintenance, events, educations, volunteer coordination) Visitor centre 'front of house' systems – welcome, information, signs, education and experience programme Develop 'Back of house' administrative systems (revenue and cash handling systems and waste management, maintenance, stakeholder relationships, etc.) On-going promotion, offshore, at Tongatapu (in airport) and at Nukualofa visitor centre Replacement of road signs and road repairs if damaged Interpretive programme planning and guide training Customer service, quality, hygiene and cash handling training 	<ul style="list-style-type: none"> Employment (up to 3.0 FTE plus volunteers) Income for tour operators, rental cars, market stall holders Increase visitor numbers to the site Increase visitors travelling from Nuku'alofa Revenue from gate takings and on-site services possible 	<ul style="list-style-type: none"> Improve safety of primary school children across the road from Ha'amonga Encourage development of related businesses (accommodation, food outlets) Improve youth education Increased spending on petrol
'Ene'io Beach and the Matamahina	<ul style="list-style-type: none"> Agreement of landowner (Government), leaseholder and entrepreneur Funds for infrastructure development (MFAT?) Road improvement for Matamahina access Road and site signs 	<ul style="list-style-type: none"> Governance and management structure in place Funds for staff and on-going maintenance from income generated at entrance gate Visitor centre, revenue and cash handling systems already in place Monitoring of project On-going promotion, offshore, at Tongatapu (in airport) and at Vava'u visitor centre Replacement of road signs and road repairs if damaged Interpretive programme and guide training 	<ul style="list-style-type: none"> Employment (up to 1.0 FTE) to maintain the improvements Income for Eneio Gardens, tour operators, rental cars, market stall holders Increase visitor numbers to the site from Neiafu township Revenue from gate takings Guide training Increase visitor activities on Vava'u and offerings for cruise tourism 	<ul style="list-style-type: none"> Encourage development of related businesses (accommodation, food outlets) Improve youth education Increased spending on petrol Increased \$ spent in Vava'u on transport

	REQUIREMENTS FOR VIABILITY		BENEFITS	
	START UP	KEEP GOING	DIRECT	INDIRECT
Lauua Lookout and Fortress	<ul style="list-style-type: none"> • Improved road access • Signage • Agreement from Ministry of Environment (owner) for development • Involvement of village, community government and Ministry of the Environment in decisions 	<ul style="list-style-type: none"> • Governance and management structure includes TFP, EEA and Environment Ministry • Funds for on-going maintenance staff of 0.5 FTE (Tonga Forest Products) • Need conservation plan • On-going promotion, offshore, at Tongatapu (in airport) and at 'Eua visitor centre • Provision of guide maps • Replacement of road signs and road repairs if damaged • Interpretive programme planning and guide training • Customer service, quality, hygiene and cash handling training 	<ul style="list-style-type: none"> • Community project • Ecotourism tour operator income • Tonga Forest Products road entry/ camping fee income • Guide book / site information sales • Transport hire (vehicle, horse, mountain bike) 	<ul style="list-style-type: none"> • 4WD Vehicle repairs • Petrol sales • Food supplies • Improve community cohesion • Craft shop visits/ sales • Local staff wages • Accommodation income • Airline income
Velata Fortress	<ul style="list-style-type: none"> • Improved road access • Signage • Agreement from owners for development • Involvement of village, community government and Governor's office in decisions 	<ul style="list-style-type: none"> • Governance and management structure • On-going promotion, offshore, at Tongatapu (in airport) and at Ha'apai visitor centre • Active district and town government • Site maintenance, renewal and replacement • Need annual budget for operation, repairs and maintenance. • Need conservation plan • Staff (1.0 FTE) and village volunteers • Management structure • Replacement of signs and road repairs if damaged 	<ul style="list-style-type: none"> • Employment (up to 1.0 FTE plus volunteers) • Income for tour operators, taxi, bike hire, market stall holders • Increase visitor numbers to the site from Pangai • Guide training 	<ul style="list-style-type: none"> • Increase length of stay on Ha'apai • Increase range of visitor activities on Ha'apai

	REQUIREMENTS FOR VIABILITY		BENEFITS	
	START UP	KEEP GOING	DIRECT	INDIRECT
Hufangalupe	<ul style="list-style-type: none"> • Improved road access • Signage • Agreement from owners for development • Involvement of village, community government and Noble in decisions 	<ul style="list-style-type: none"> • Governance and management structure • On-going maintenance funded from income generated at the entrance gate • Funds needed for staffing (admin, maintenance, events, educations, volunteer coordination) • Visitor centre ‘front of house’ systems – welcome, information, education and experience programme • Develop ‘Back of house’ administrative systems (revenue and cash handling systems and waste management, maintenance, stakeholder relationships, etc.) • On-going promotion, offshore, at Tongatapu (in airport) and at Nukualofa visitor centre • Replacement of road signs and road repairs if damaged • Interpretive programme planning and guide training especially regarding risks and safety • Customer service, quality, hygiene and cash handling training 	<ul style="list-style-type: none"> • Employment (up to 3.0 FTE plus volunteers) • Income for tour operators, rental cars, market stall holders • Increase tourist visitor numbers at the site • Increase visitors travelling from Nuku’alofa • Revenue from gate takings and on-site services possible 	<ul style="list-style-type: none"> • Improve safety of primary school children across the road from Ha’amonga • Encourage development of related businesses (accommodation, food outlets) • Improve youth education • Increased spending on petrol
Lakufa’anga & Li’angahuo a Maui	<ul style="list-style-type: none"> • Improved road access • Signage • Agreement from Ministry of Environment (owner) for development • Involvement of village, community government and Ministry of the Environment in decisions 	<ul style="list-style-type: none"> • Governance and management structure includes community, EEA and Environment Ministry • Funds for maintenance staff 0.5 FTE • On-going promotion, offshore, at Tongatapu (in airport) and at ‘Eua visitor centre • Provision of guide maps • Replacement of road signs and road repairs • Interpretive programme planning and guide training • Customer service, quality, hygiene and cash handling training 	<ul style="list-style-type: none"> • Community project • Ecotourism tour operator income • Guide book / site information sales • Transport hire (vehicle, horse, mountain bike) 	<ul style="list-style-type: none"> • 4WD Vehicle repairs • Increased petrol sales • Food supplies • Improve community cohesion • Craft shop visits/ sales • Local staff wages • Accommodation income • Airline income

	REQUIREMENTS FOR VIABILITY		BENEFITS	
	START UP	KEEP GOING	DIRECT	INDIRECT
Feletoa	<ul style="list-style-type: none"> • Agreement of landowner (Government), leaseholder and entrepreneur • Funds for infrastructure development • Access improvement for significant arts of Feletoa site and story • Improve safety at well • Road and site signs 	<ul style="list-style-type: none"> • Governance and management structure includes community, land owner, residents and Governor's Office • Little income generation possible because a dispersed site • Funds for staff and on-going maintenance from income, possibly from government sources • Need conservation plan • On-going promotion, offshore, at Tongatapu (in airport) and at Vava'u visitor centre • Replacement of signs and repairs • Interpretive programme and guide training 	<ul style="list-style-type: none"> • Employment (up to 1.0 FTE) to maintain the improvements • Income for tour operators, taxi, market stall holders and landowners if fee paying concessions developed • Increase visitor numbers to the site from Neiafu • Revenue from gate takings • Guide training • Increase visitor activities on Vava'u and offerings for cruise tourism 	<ul style="list-style-type: none"> • Encourage development of related businesses (accommodation, food outlets) • Improve youth education • Increased spending on petrol • Increased \$ spent in Vava'u on transport • Increased income for accommodation, airlines
Uoleva Island	<ul style="list-style-type: none"> • Agreement of landowner (to be determined) 	<ul style="list-style-type: none"> • Governance and management structure includes community, land owner, resort owners and Governor's Office • Very little income generation possible • Funds for staff and on-going maintenance from income, possibly from government sources • Need conservation plan • On-going promotion, offshore, at Tongatapu (in airport) and at Vava'u visitor centre • Replacement of signs and repairs • Interpretive programme and guide training 	<ul style="list-style-type: none"> • Employment (up to 0.5 FTE) to maintain the improvements • Income for tour operators and resort owners and possibly landowners if fee paying concessions developed • Increase visitor numbers to the site from Pangai township and to/from Uiha Island • Increase visitor activities on Ha'apai • Develop new boat tour operations 	<ul style="list-style-type: none"> • Improve boat handling and water safety

Appendix 10 Revenue, Operations and Capital Establishment costs and Year 1 and 2 maintenance

Appendix 10.1 - Ha'amonga a Maui: Tongatapu Island

Site name: Ha'amonga a Maui, Tongatapu		Supporting village name: Niutoa														
Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.																
	Visitor #	Charge	# stalls										TOTAL	Phase I	Phase II	Ongoing revenue/costs
Revenue																
Fees and charges (future visitor estimate)	30000	\$	2										\$	60,000		
Stall rentals - food, souvenirs (per year)		\$	200	10									\$	2,000		
Parking	7500	\$	5										\$	37,500		
Services (tours)	5000	\$	2										\$	10,000		
Performance	5000	\$	5										\$	25,000		
Subtotal													\$	134,500		\$ 134,500
Operations																
	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	Subtotal				
Site mgr, events & retail	1	\$ 20,000														\$ 20,000
Maintenance	1	\$ 15,000														\$ 15,000
Administration	1	\$ 15,000														\$ 15,000
Running costs			\$ 20,000													\$ 20,000
Tools & Equipment			\$ 10,000													\$ 10,000
Repairs & maintenance			\$ 20,000													\$ 20,000
Volunteers incentives			\$ 2,000													\$ 2,000
Marketing			\$ 10,000													\$ 10,000
Exhibit renewal			\$ 5,000													\$ 5,000
Education/ events development			\$ 5,000													\$ 5,000
Retail development			\$ 5,000													\$ 5,000
Subtotal		\$ 50,000	\$ 77,000													\$ 127,000
Construction																
Standard fence				\$ 600	\$ 12								\$ 7,200	\$ 7,200		
Pig proof fence					\$ 25								\$ -			
Shrubland clearance/management						\$ 0.4	\$ 3,000						\$ 1,200	\$ 1,200		
Treeland maintenance and planting						\$ 0.2	\$ 1,000						\$ 200	\$ 200		
Top-quality track construction				\$ 200	\$ 60								\$ 12,000	\$ 12,000		
Budget-quality track construction				\$ 200	\$ 20								\$ 4,000	\$ 4,000		
Track maintenance								\$ 1.0	\$ 500				\$ 500		\$ 500	
Gravel access road maintenance								\$ 0.5	\$ 1,000				\$ 500		\$ 500	
General parkland maintenance, mowing, cleaning etc.										\$ 500	\$ 25	\$ 12,500		\$ 12,500		
Site stabilisation/restoration/reconstruction											\$ 40	\$ 12,000		\$ 12,000		
On-site shelter (s) design prefabricate erect												\$ 25,000		\$ 25,000		
Design and construct carpark												\$ 15,000	\$ 15,000	\$ 15,000		
Technical inputs to conservation planning										\$ 150	\$ 100	\$ 15,000	\$ 15,000	\$ 15,000		
Conservation plan (needs to cover precise area/location for carpark)												\$ 6,000	\$ 6,000	\$ 6,000		
Interpretation plan												\$ 6,000	\$ 6,000	\$ 6,000		
Improved village infrastructure (needs further discussion)																
Training										\$ 40	\$ 90	\$ 3,600		\$ 3,600		
Improved recording of site area										\$ 40		\$ 5,000		\$ 5,000		
Interpretation materials/signs installation												\$ 2,000		\$ 2,000		
Booklets /leafets												\$ 8,000		\$ 8,000		
Visitor satisfaction surveys (to start ASAP to guide conservation planning, USP to administer)												\$ 8,000		\$ 8,000		
TOTAL YEAR 1, 2													\$ 129,700	\$ 60,600	\$ 69,100	\$ 127,000
P/L Haamonga																
Annual grant																
																\$ 7,500

Appendix 10.2 - 'Ene'io Beach Walkway and Lookout, Vava'u Island

Ene'io Beach		Supporting village name Tu'anekeviale														
Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.														Phase I	Phase II	Ongoing revenue/costs
Revenue	Visitor #	Charge	# stalls									TOTAL				
Fees and charges	8000	\$ 2										\$ 16,000				
Stall rentals - food, souvenirs (per year)		\$ 200	10									\$ 2,000				
Parking	2000	\$ 5										\$ 10,000				
Services (tours)	1000	\$ 2										\$ 2,000				
Performance	1000	\$ 5										\$ 5,000				
Subtotal												\$ 35,000			\$ 35,000	
Operations	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Site mgr, events & retail															\$ -	
Maintenance	0.5	\$ 15,000													\$ 15,000	
Administration															\$ -	
Running costs			\$ 10,000												\$ 10,000	
Tools & Equipment			\$ 3,000												\$ 3,000	
Repairs & maintenance			\$ 2,000												\$ 2,000	
Volunteers incentives			\$ 1,000												\$ 1,000	
Marketing			\$ 2,000												\$ 2,000	
Exhibit renewal			\$ 3,000												\$ 3,000	
Education/ events development			\$ 1,000												\$ 1,000	
Retail development			\$ 1,000												\$ 1,000	
Subtotal		\$ 15,000	\$ 23,000												\$ 38,000	
				Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Standard fence					\$ 12											
Pig proof fence				\$ 400	\$ 25							\$ 10,000	\$ 10,000			
Shrubland clearance/management							\$ 3,000									
Treeland maintenance and planting						\$ 1.0	\$ 1,000					\$ 1,000	\$ 1,000			
Top-quality track construction incl cliff edge				\$ 300	\$ 60							\$ 18,000	\$ 18,000			
Budget-quality track construction					\$ 20											
Track maintenance								\$ 1.0	\$ 500			\$ 500	\$ 500			
Site stabilisation/restoration/reconstruction																
On-site shelter (s) and toilets design prefabricate erect												\$ 12,000	\$ 12,000			
Improve water tower												\$ 10,000	\$ 10,000			
Interpretation plan																
Improved village infrastructure																
Improved recording of leased point site area including langi and defences										\$ 40	\$ 90	\$ 3,600	\$ 3,600			
Booklets /leafets												\$ 2,000	\$ 2,000			
Visitor satisfaction surveys												\$ 2,000	\$ 2,000			
TOTAL YEAR 1, 2												\$ 59,100	\$ 59,100	\$ -	\$ -	
P/L Enio beach													\$ 59,100			
Annual support needed															-\$ 3,000	

Appendix 10.3 - Lakufa'anga and Li'angahuo a Maui, 'Eua Island

Site name: Lakufa'anga and Li'angahuo a Maui		Supporting village: 'Eua Island				Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.										
	Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs	
Revenue																
Fees and charges	3500	\$	2									\$ 7,000				
Stall rentals - food, souvenirs (per year)		\$	20	6								\$ 120				
Parking	875	\$	5									\$ 4,375				
Services (tours)	438	\$	2									\$ 875				
Performance	438	\$	5									\$ 2,188				
Subtotal												\$ 14,558			\$ 14,558	
Operations																
	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Site mgr, events & retail & admin	1	\$ 20,000													\$ 20,000	
Maintenance	1	\$ 15,000													\$ 15,000	
Running costs			\$ 10,000												\$ 10,000	
Tools & Equipment			\$ 10,000												\$ 10,000	
Repairs & maintenance			\$ 10,000												\$ 10,000	
Volunteers incentives			\$ 1,000												\$ 1,000	
Marketing			\$ 3,000												\$ 3,000	
Exhibit renewal			\$ 3,000												\$ 3,000	
Education/ events development			\$ 1,000												\$ 1,000	
Retail development			\$ 1,000												\$ 1,000	
Subtotal		\$ 35,000	\$ 39,000												\$ 74,000	
Construction																
	No. staff	Salary		Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Standard fence (by gate)				400.00	\$ 12							\$ 4,800	\$ 4,800			
Pig proof fence					\$ 25											
Shrubland clearance/management							\$ 3,000					\$ 3,000	\$ 3,000			
Treeland maintenance and planting						\$ 1.0	\$ 1,000					\$ 1,000		\$ 1,000		
Top-quality track construction				200.00	\$ 60							\$ 12,000	\$ 12,000			
Budget-quality track construction				200.00	\$ 20							\$ 4,000		\$ 4,000		
Track maintenance								\$ 1.0	\$ 500			\$ 500		\$ 500		
Gravel access road maintenance								\$ 2.0	\$ 1,000			\$ 2,000		\$ 2,000		
General parkland maintenance, mowing, cleaning etc.										\$ 250	\$ 25	\$ 6,250		\$ 6,250		
Maintain platform												\$ 1,500		\$ 1,500		
On-site shelter (s) design prefabricate erect												\$ 12,000	\$ 12,000			
Design and construct carpark												\$ 15,000	\$ 15,000			
Build Lakufa'anga platform												\$ 18,500	\$ 18,500			
Technical inputs to management planning (to include geotech report on cliff edge and engineer's survey of platform)										\$ 200	\$ 150	\$ 30,000	\$ 30,000			
Management plan needs to include precise route for track, carpark												\$ 15,000	\$ 15,000			
Interpretation plan												\$ 6,000	\$ 6,000			
Improved village infrastructure																
Training										\$ 40	\$ 90	\$ 3,600	\$ 3,600			
Improved recording of site area												\$ 5,000		\$ 5,000		
Interpretation materials/signs installation												\$ 2,000		\$ 2,000		
Booklets /leafets												\$ 2,000		\$ 2,000		
Visitor satisfaction surveys												\$ 2,000		\$ 2,000		
												TOTAL YEAR 1, 2	\$ 144,150	\$ 119,900	\$ 24,250	\$ -
												\$ -	\$ 144,150			
P/L Lakufa'anga and Li'angahuo a Maui															-\$ 59,443	
Annual grant															\$ 59,443	

Appendix 10.4 - Lauua Lookout and Fortress, 'Eua Island

Site name Lauua Lookout & Fortress		Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.										Eua Tourism Association			
	Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs
Revenue															
Fees and charges	1000	\$	2									\$ 2,000			
Stall rentals - food, souvenirs (per year)	-	-										-			
Parking	500	\$	2									\$ 1,000			
Services (tours)	300	\$	2									\$ 600			
Performance	-	\$	-									\$ -			
Subtotal												\$ 3,600			\$ 3,600
Operations															
	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs
Site mgr, events & retail	-	-													-
Maintenance	0.5	\$ 15,000													\$ 15,000
Administration	-	-													-
Running costs			\$ 5,000												\$ 5,000
Tools & Equipment			\$ 2,000												\$ 2,000
Repairs & maintenance			\$ 2,000												\$ 2,000
Volunteers incentives			\$ 1,000												\$ 1,000
Marketing			\$ 1,000												\$ 1,000
Exhibit renewal			\$ 2,000												\$ 2,000
Education/ events development			\$ 1,000												\$ 1,000
Retail development			-												-
Subtotal		\$ 15,000	\$ 14,000												\$ 29,000
	No. staff	Salary		Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs
Standard fence					\$ 12										
Pig proof fence					\$ 25										
Shrubland clearance/management						\$ 1.0	\$ 3,000					\$ 3,000	\$ 3,000		
Treeland maintenance and planting						\$ 1.0	\$ 1,000					\$ 1,000	\$ 1,000		
Top-quality track construction				\$ 600	\$ 60							\$ 36,000	\$ 36,000		
Budget-quality track construction				\$ 200	\$ 20							\$ 4,000	\$ 4,000		
Track maintenance								\$ 1.0	\$ 500			\$ 500	\$ 500		
Wooden platform maintenance												\$ 2,000	\$ 2,000		
Gravel access road maintenance								\$ 2.0	\$ 1,000			\$ 2,000	\$ 2,000		
Site stabilisation/restoration/reconstruction										\$ 40	\$ 40	\$ 1,600	\$ 1,600		
On-site shelter (s) design prefabricate erect												\$ 6,000	\$ 6,000		
Technical inputs to management planning (to include geotech report on cliff edge and engineer's survey of platform)										\$ 200	\$ 150	\$ 30,000	\$ 30,000		
Management plan (needs to include precise route for track and site conservation)												\$ 10,000	\$ 10,000		
Interpretation plan												\$ 6,000	\$ 6,000		
Improved village infrastructure															
Training										\$ 40	\$ 90	\$ 3,600	\$ 3,600		
Improved recording of site area										\$ 40	\$ 40	\$ 1,600	\$ 1,600		
Interpretation plan and drawn visualisations of what site looked like												\$ 5,000	\$ 5,000		
Booklets /leaflets												\$ 2,000	\$ 2,000		
Visitor satisfaction surveys												\$ 2,000	\$ 2,000		
TOTAL YEAR 1, 2												\$ 116,300	\$ 116,300	\$ -	\$ -
P/L Lau'au Fortress													\$ 116,300		-\$ 25,400
Annual grant															\$ 25,400

Appendix 10.5 - Velata Fortress, Lifuka Is, Ha'apai Group

Site name Velata Fortress		Supporting village name, Ha'ato'u															
Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.																	
		Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs	
Revenue																	
Fees and charges		1000	\$ 5										\$ 5,000				
Stall rentals - food, souvenirs (per year)			\$ 50	4									\$ 200				
Parking													\$ -				
Services (tours)		500	\$ 2										\$ 1,000				
Performance													\$ -				
Subtotal													\$ 6,200			\$ 6,200	
Operations																	
		No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Maintenance / Admin		1	\$ 35,000													\$ 35,000	
Running costs				\$ 10,000												\$ 10,000	
Tools & Equipment				\$ 5,000												\$ 10,000	
Repairs & maintenance				\$ 10,000												\$ 20,000	
Volunteers incentives				\$ 10,000												\$ 2,000	
Marketing				\$ 50,000												\$ 10,000	
Exhibit renewal				\$ 5,000												\$ 5,000	
Education/ events development				\$ 2,500												\$ 5,000	
Retail development				\$ 2,500												\$ 5,000	
Subtotal			\$ 35,000	\$ 95,000												\$ 102,000	
Construction																	
					Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
Standard fence						\$ 12							\$ -				
Pig proof fence					\$ 500	\$ 25							\$ 12,500	\$ 12,500			
Shrubland clearance/management							\$ 1.0	\$ 3,000					\$ 3,000	\$ 3,000			
Treeland maintenance and planting							\$ 1.0	\$ 1,000					\$ 1,000	\$ 1,000			
Top-quality track construction					\$ 600	\$ 60							\$ 36,000	\$ 36,000			
Budget-quality track construction					\$ 200	\$ 20							\$ 4,000	\$ 4,000			
Track maintenance									\$ 1.0	\$ 500			\$ 500		\$ 500		
Gravel access road maintenance									\$ 2.0	\$ 1,000			\$ 2,000		\$ 2,000		
General parkland maintenance, mowing, cleaning etc.											\$ 250	\$ 25	\$ 6,250		\$ 6,250		
Site stabilisation/restoration/reconstruction											\$ 100	\$ 40	\$ 4,000	\$ 4,000			
On-site shelter (s) design prefabricate erect													\$ 12,000	\$ 12,000			
Design and construct carpark													\$ 20,000		\$ 20,000		
Management plan needs to include precise route for site conservation improvements, track, carpark)													\$ 15,000	\$ 15,000			
Interpretation plan and drawn visualisations of what site looked like													\$ 6,000	\$ 6,000			
Improved village infrastructure																	
Training											\$ 40	\$ 90	\$ 3,600		\$ 3,600		
Improved recording of site area											\$ 40	\$ 90	\$ 3,600		\$ 3,600		
Interpretation materials/signs installation													\$ 5,000	\$ 5,000			
Booklets /leafets													\$ 2,000		\$ 2,000		
Visitor satisfaction surveys													\$ 3,000		\$ 3,000		
TOTAL YEAR 1, 2													\$ 139,450	\$ 98,500	\$ 40,950	\$ -	
P/L Velata Fortress														\$ 139,450			
Annual support needed																	-\$ 95,800

Appendix 10.6 - Hufangalupe, Tongatapu Island

Site name Hufangalupe		Supporting village name Vaini				Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ, Built costs NZD.											
		Visitor #	Charge	# stalls								TOTAL	Phase I	Phase II	Ongoing revenue/costs		
Revenue																	
Fees and charges		4500	\$ 2									\$ 9,000					
Stall rentals - food, souvenirs (per year)			\$ 200	5								\$ 1,000					
Parking		1125	\$ 5									\$ 5,625					
Services (tours)		2000	\$ 2									\$ 4,000					
Performance		1000	\$ 5									\$ 5,000					
	Subtotal											\$ 24,625			\$ 24,625		
Operating																	
		No. staff	Salary		Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
	Site mgr, events & retail	1	\$ 20,000													\$ 20,000	
	Maintenance	1	\$ 15,000													\$ 15,000	
	Administration	1	\$ 15,000													\$ 15,000	
Running costs				\$ 20,000												\$ 20,000	
Tools & Equipment				\$ 10,000												\$ 10,000	
Repairs & maintenance				\$ 40,000												\$ 40,000	
Volunteers incentives				\$ 2,000												\$ 2,000	
Marketing				\$ 10,000												\$ 10,000	
Exhibit renewal				\$ 10,000												\$ 10,000	
Education/ events development				\$ 5,000												\$ 5,000	
Retail development				\$ 5,000												\$ 5,000	
	Subtotal		\$ 30,000	\$ 102,000												\$ 152,000	
Construction																	
Standard fence						\$ 12							\$ -				
Pig proof fence						\$ 25							\$ -				
Shrubland clearance/management								\$ 3,000					\$ -				
Treeland maintenance and planting							\$ 1.0	\$ 1,000					\$ 1,000	\$ 1,000			
Top-quality track construction					\$ 600	\$ 60							\$ 36,000	\$ 36,000			
Budget-quality track construction					\$ 200	\$ 20			\$ 2.0				\$ 4,000	\$ 4,000			
Track maintenance										\$ 500			\$ -				
Pre-fab steps into sinkhole, wooden platform near cliff edge													\$ 7,000		\$ 7,000		
Gravel access road maintenance									\$ 2.0	\$ 1,000			\$ 2,000		\$ 2,000		
General parkland maintenance, mowing, cleaning etc.											\$ 250	\$ 25	\$ 6,250		\$ 6,250		
Site stabilisation/restoration/reconstruction												\$ 40					
On-site shelter (s) design prefabricate erect													\$ 12,000		\$ 12,000		
Design and construct carpark													\$ 30,000		\$ 30,000		
Technical inputs to management planning (to include geotech report on cliff edge)										\$ 200	\$ 150		\$ 30,000	\$ 30,000			
Management plan needs to include precise route for track, carpark)													\$ 15,000	\$ 15,000			
Interpretation plan													\$ 6,000	\$ 6,000			
Improved village infrastructure																	
Training										\$ 40	\$ 90		\$ 3,600		\$ 3,600		
Improved recording of site area										\$ 40	nil						
Interpretation materials/signs installation													\$ 5,000		\$ 5,000		
Booklets /leafets													\$ 2,000		\$ 2,000		
Visitor satisfaction surveys													\$ 8,000		\$ 8,000		
													TOTAL YEAR 1, 2	\$ 167,850	\$ 92,000	\$ 75,850	\$ 152,000
																\$ 167,850	
P/L Hufangalupe																	
Annual support needed																-\$ 127,375	

Appendix 10.7 - Feletoa Fortress, Vava'u Island

Site name Feletoa fortress		Supporting village name Feletoa															
		Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs	
Revenue																	
	Fees and charges	1500	\$ 2										\$ 3,000				
	Stall rentals - food, souvenirs (per year)		\$ 50	4									\$ 200				
	Parking	375	\$ 5										\$ 1,875				
	Services (tours)	1000	\$ 2										\$ 2,000				
	Performance, festival events		\$ 50	20									\$ 1,000				
	Subtotal												\$ 8,075			\$ 8,075	
Operations																	
		No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL				
	Site mgr, events & retail & admin	1	\$ 20,000													\$ 20,000	
	Maintenance Administration	1	\$ 15,000													\$ 15,000	
	Running costs			\$ 10,000												\$ 10,000	
	Tools & Equipment			\$ 5,000												\$ 10,000	
	Repairs & maintenance			\$ 8,000												\$ 20,000	
	Volunteers incentives			\$ 1,000												\$ 2,000	
	Marketing			\$ 5,000												\$ 10,000	
	Exhibit renewal			\$ 5,000												\$ 5,000	
	Education/ events development			\$ 2,500												\$ 5,000	
	Retail development			\$ 2,000												\$ 5,000	
	Subtotal		\$ 35,000	\$ 38,500												\$ 102,000	
					Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs	
	Rubbish removal												\$ 2,000	\$ 2,000			
	Standard fence				\$ 400	\$ 12							\$ 4,800		\$ 4,800		
	Pig proof fence				\$ 400	\$ 25							\$ 10,000		\$ 10,000		
	Shrubland clearance/management						\$ 1.0	\$ 3,000					\$ 3,000		\$ 3,000		
	Treeland maintenance and planting						\$ 1.0	\$ 1,000					\$ 1,000		\$ 1,000		
	Top-quality track construction				\$ 300	\$ 60							\$ 18,000		\$ 18,000		
	Budget-quality track construction				\$ 400	\$ 20							\$ 8,000		\$ 8,000		
	Track maintenance								\$ 1.0	\$ 500			\$ 500		\$ 500		
	Pre-fab steps into sinkhole and well												\$ 4,000		\$ 4,000		
	Gravel access road maintenance								\$ 2.0	\$ 1,000			\$ 2,000		\$ 2,000		
	General parkland maintenance, mowing, cleaning etc.										\$ 250	\$ 25	\$ 6,250	\$ 6,250			
	Site stabilisation/restoration/reconstruction										\$ 100	\$ 40	\$ 4,000		\$ 4,000		
	On-site shelter (s) design prefabricate erect												\$ 12,000		\$ 12,000		
	Design and construct carpark												\$ 30,000		\$ 30,000		
	Management plan needs to include site conservation and precise route for track, carpark)												\$ 15,000	\$ 15,000			
	Interpretation plan												\$ 6,000	\$ 6,000			
	Improved village infrastructure (waste management)												\$ 4,000		\$ 4,000		
	Training										\$ 40	\$ 90	\$ 3,600		\$ 3,600		
	Improved recording of site area										\$ 40	nil	\$ -	\$ -			
	Interpretation materials/signs installation												\$ 5,000		\$ 5,000		
	Booklets /leaflets												\$ 2,000		\$ 2,000		
	Visitor satisfaction surveys												\$ 2,000		\$ 2,000		
													TOTAL YEAR 1, 2	\$ 143,150	\$ 29,250	\$ 113,900	\$ -
	P/L													\$ 143,150			
	Annual support needed															-\$ 93,925	

Appendix 10.8 - Matamahina, Vava'u Island

Matamahina		Supporting village name Tu'anekeviale			Assumes: future visitor capacity, salaries 1/2 NZ, running costs 1/2 NZ. Built costs NZD.										
	Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs
Revenue															
Fees and charges	1000	\$	2									\$ 2,000			
Stall rentals - food, souvenirs (per year)												\$ -			
Parking	250	\$	5									\$ 1,250			
Services (tours)	500	\$	2									\$ 1,000			
Performance	500	\$	5									\$ 2,500			
	Subtotal											\$ 6,750			\$ 6,750
Operations															
	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs
Site mgr, events & retail															\$ -
Maintenance	0.5	\$ 15,000													\$ 15,000
Administration															\$ -
Running costs			\$ 5,000												\$ 5,000
Tools & Equipment			\$ 3,000												\$ 3,000
Repairs & maintenance			\$ 5,000												\$ 5,000
Volunteers incentives			\$ 1,000												\$ 1,000
Marketing			\$ 1,000												\$ 1,000
Exhibit renewal			\$ 3,000												\$ 3,000
Education/ events development			\$ 1,000												\$ 1,000
Retail development			\$ -												\$ -
	Subtotal	\$ 15,000	\$ 19,000												\$ 34,000
Staff															
				Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II	Ongoing costs
Standard fence					\$ 12										
Pig proof fence				\$ 400	\$ 25							\$ 10,000		\$ 10,000	
Shrubland clearance/management							\$ 3,000								
Treeland maintenance and planting						\$ 1.0	\$ 1,000					\$ 1,000		\$ 1,000	
Top-quality track construction incl cliff edge				\$ 300	\$ 60							\$ 18,000		\$ 18,000	
Budget-quality track construction					\$ 20										
Track maintenance								\$ 1.0	\$ 500			\$ 500		\$ 500	
Gravel access road maintenance								\$ 2.0	\$ 1,000			\$ 2,000		\$ 2,000	
Site stabilisation/restoration/reconstruction										\$ 100	\$ 40	\$ 4,000		\$ 4,000	
On-site shelter (s) and toilets design prefabricate erect												\$ 12,000		\$ 12,000	
Waste management system												\$ 4,000		\$ 4,000	
Interpretation plan												\$ 6,000		\$ 6,000	
Improved village infrastructure															
Improved recording of Matamahina viewing area										\$ 40	\$ 90	\$ 3,600		\$ 3,600	
Booklets /leafets												\$ 2,000		\$ 2,000	
Visitor satisfaction surveys												\$ 2,000		\$ 2,000	
												\$ 65,100	\$ -	\$ 65,100	\$ -
P/L Matamahina															
Annual grant													\$ 65,100		-\$ 27,250
Total P/L Eneio Beach and Matamahina															
Annual grant													\$ 59,100	\$ 65,100	\$ 124,200
															-\$ 30,250

Appendix 10.9 - Uoleva Island, Ha'apai Group

Uoleva sia heu lupe		Supporting village name Hihifo															
		Visitor #	Charge	# stalls									TOTAL	Phase I	Phase II	Ongoing revenue/costs	
Revenue																	
Fees and charges		350	\$	2									\$ 700				
Stall rentals - food, souvenirs (per year)													\$ -				
Parking													\$ -				
Services (tours)		350	\$	2									\$ 700				
Performance													\$ -				
	Subtotal												\$ 1,400			\$ 1,400	
Operations																	
	Maintenance	No. staff	Salary	Operating	Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL				
Running costs		1	\$ 15,000	\$ 5,000												\$ 15,000	
Tools & Equipment				\$ 3,000												\$ 5,000	
Repairs & maintenance				\$ 5,000												\$ 3,000	
Volunteers incentives				\$ 1,000												\$ 5,000	
Marketing																\$ 1,000	
Exhibit renewal				\$ 3,000												\$ -	
Education/ events development				\$ 1,000												\$ 3,000	
Retail development																\$ 1,000	
	Subtotal		\$ 15,000	\$ 18,000												\$ -	
																\$ 33,000	
Construction																	
					Metres	Rate/m (\$)	Ha	Rate/ha (\$)	Km	Rate/km	Hours	Rate (\$)	TOTAL	Phase I	Phase II		
Standard fence						\$ 12											
Pig proof fence					\$ 600	\$ 25							\$ 15,000	\$ 15,000			
Shrubland clearance/management							\$ 3.0	\$ 3,000					\$ 9,000	\$ 9,000			
Treeland maintenance and planting							\$ 1.0	\$ 1,000					\$ 1,000	\$ 1,000			
Top-quality track construction						\$ 60											
Budget-quality track construction					\$ 500	\$ 20							\$ 10,000	\$ 10,000			
Track maintenance									\$ 1.0	\$ 500			\$ 500	\$ 500			
Pre-fab steps on to two platforms													\$ 8,000		\$ 8,000		
General parkland maintenance, mowing, cleaning etc.											\$ 250	\$ 25	\$ 6,250		\$ 6,250		
Site stabilisation/restoration/reconstruction											\$ 500	\$ 40	\$ 20,000	\$ 20,000			
On-site shelter (s) design prefabricate erect													\$ 6,000	\$ 6,000			
Safety plan for small boat transport													\$ 8,000		\$ 8,000		
Provide safety equipment (boat surveys, life jackets, SSB radio?, ELBs etc.)													\$ 15,000		\$ 15,000		
Management plan needs to include precise route for tracks and conservation plan for four sia													\$ 15,000	\$ 15,000			
Interpretation plan													\$ 6,000	\$ 6,000			
Improved village infrastructure																	
Training											\$ 40	\$ 90	\$ 3,600		\$ 3,600		
Improved recording of site area											\$ 40	\$ 100	\$ 4,000	\$ 4,000			
Interpretation plan and drawn visualisations of what site looked like													\$ 8,000	\$ 8,000			
Booklets /leafets													\$ 2,000		\$ 2,000		
Visitor satisfaction surveys													\$ 3,000		\$ 3,000		
													TOTAL YEAR 1, 2	\$ 140,350	\$ 94,500	\$ 45,850	\$ -
P/L Uoleva Island																	
Annual support needed														\$ 140,350		-\$ 31,600	

