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# **Rottnest Island Research Strategy 2010 – 2014**

**Rottnest Island Authority  
November 2010**

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# TABLE OF CONTENTS

Contents	Page
<b>1. Introduction</b>	1
1.1 Objective	1
1.2 Context	1
1.3 Research Streams	1
1.4 Support	2
<b>2. Research Program Categories</b>	3
2.1 General Research Program	3
2.1.1 Description	3
2.1.2 Eligibility	3
2.1.3 Guidelines	3
2.1.4 General Research Projects	3
2.2 Research Funding Program	4
2.2.1 Description	4
2.2.2 Eligibility	4
2.2.3 Guidelines	4
2.2.4 Research Funding Projects	5
2.2.5 Evaluation Criteria	5
2.3 Research Partnership Program	5
2.3.1 Description	5
2.3.2 Eligibility	6
2.3.3 Guidelines	6
2.3.4 Research Partnership Projects	6
<b>3. Evaluation Criteria</b>	6
<b>4. Application Guidelines</b>	7
4.1 Submitting an Application	7
4.2 Application Forms	8
4.3 Closing Dates	9
<b>5. Timeline</b>	9
5.1 Before Submitting an Application Form	9
5.2 When Submitting an Application	9
5.3 After Submitting a Research Application	10
5.4 Upon Completion of the Research	10
<b>6. Roles</b>	11
6.1 Roles of the Researcher	11
6.1.1 Regulations	11
6.1.2 Reporting	11
6.2 Roles of the RIA	11
6.2.1 Communication	11
6.2.2 Accountability	11
6.2.3 Assistance	11



## **APPENDICES**

- Appendix 1 – General Research Projects
- Appendix 2 – Research Funding Projects
- Appendix 3 – Research Funding Program Evaluation Report

## **WEBSITE LINKS**

All forms associated with the Research Strategy can be found at the following link:

[http://www.rotnestisland.com/en/Industry/Environmental\\_initiatives/Pages/Environmental\\_research.aspx](http://www.rotnestisland.com/en/Industry/Environmental_initiatives/Pages/Environmental_research.aspx)

# 1. INTRODUCTION



## 1.1 Objective

This Research Strategy has been developed to enable the Rottnest Island Authority (RIA) to fill knowledge gaps and provide support to the ongoing management of the Rottnest Island Reserve. The Strategy will identify the principles, administration and potential support provided by RIA. The RIA is inviting proposals from interested parties to conduct research within the Rottnest Island Reserve. Potential projects may be carried out by school group research, research-related field trips, individual, Honours and Postgraduate candidates.

## 1.2 Context

Rottnest Island (RI) is located 19km off the Perth mainland and is an A-Class Reserve formed by unique marine and terrestrial ecosystems that provide significant habitat to genetically distinct endangered, threatened and migratory fauna species. Rottnest supports a diverse natural environment that provides ideal conditions for investigating a wide range of ecological, social, cultural, sustainable and economic issues.

Cultural heritage values date back over 15,000 years, when Aboriginal people inhabited the Island, and extend to a rich military and maritime history with numerous historic shipwrecks located within the Marine Reserve. The Island receives an estimated half a million visitors annually, with nearly half of those having visited the Island more than ten times. The Island's cultural, social and ecological heritages interact with contemporary attributes, providing opportunities for a vast range of research topics of global and regional relevance.

## 1.3 Research Streams

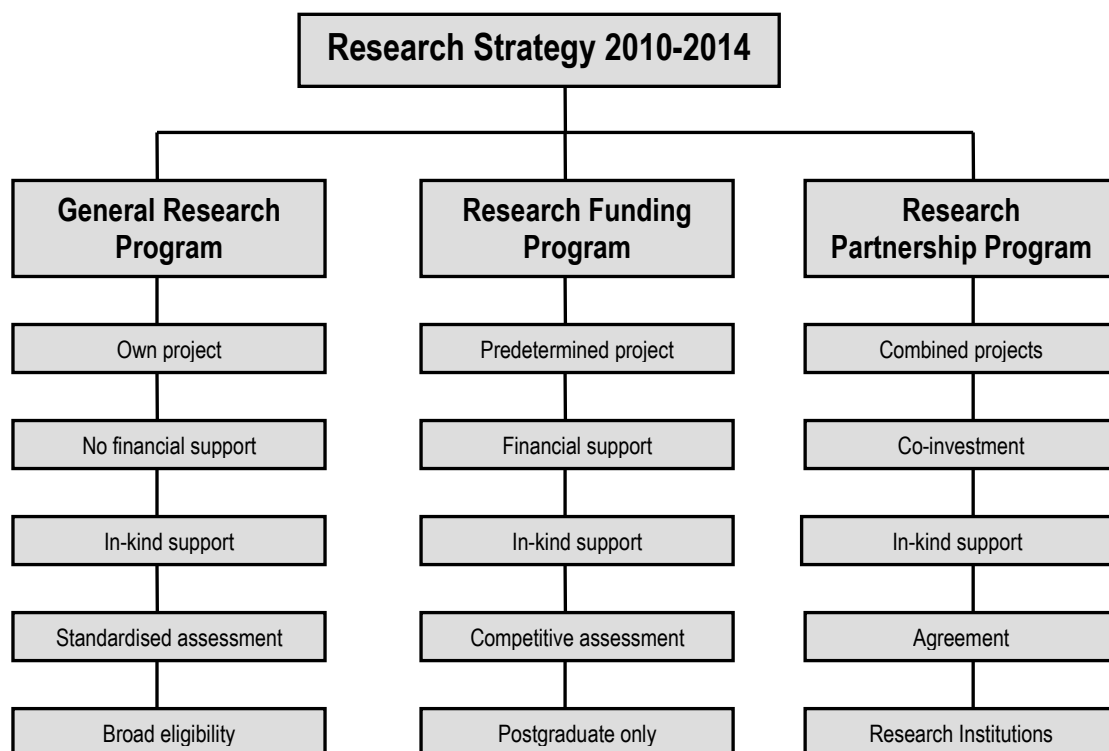
The Rottnest Island Research Strategy 2010-2014 offers three distinct research programs.

The **General Research Program** suits the broader population, from school groups to PhD candidates that wish to determine and design their own research project. The RIA suggests a list of research priorities to assist with developing research questions (Appendix 1). After the research proposal is submitted, projects are assessed only against assessment criteria within the application pack. Upon approval a permit will be granted with certain conditions applied. In this research category, researchers have the opportunity to apply for in-kind support but direct funding is not available.

The **Research Funding Program** consists of the provision of financial support for the investigation of predetermined research questions set by the RIA. The research questions have set outcomes and usually have a direct management application pertinent to current issues on the Island. Only

postgraduates or experienced individual researchers are eligible to apply for the research funding program. Researchers can also apply for in-kind support.

The **Research Partnership Program** is a mechanism to consolidate and enhance overall research effort and outcomes by creating research partnerships with researchers and/or organisations that are already conducting or have similar research interests within the Rottnest Island Reserve. The RIA conducts its own monitoring and research through operational programs and is interested in pooling, sharing and consolidating data, expertise, resources and/or financial investment with other parties to maximise research outcomes. Formalised agreements clearly outlining collaboration and co-investment responsibilities may be generated between the RIA and interested parties.



**Figure 1.** Outline of Research Strategy 2010 – 2014

### 1.4 Support

Support offered for research projects may be both financial and in-kind, depending on the category of the project.

*In-Kind:* RIA may provide researchers with accommodation at the Rottnest Island Research Station, which is a non-commercial accommodation facility designated solely for the purpose of housing visiting researchers and university student groups whilst conducting fieldwork on the Island<sup>1</sup>. Other in-

<sup>1</sup> Detailed requirements for research station bookings can be found at this link: [http://www.rotnnestisland.com/en/Industry/Environmental\\_initiatives/Pages/Environmental\\_research.aspx](http://www.rotnnestisland.com/en/Industry/Environmental_initiatives/Pages/Environmental_research.aspx)

kind support may include RIA staff assistance, equipment and transport to and on the Island. All researchers may apply for in-kind support.

*Funding:* The RIA are planning to invest up to \$50,000 each year over the next four years as part of Initiative 20 in the Rottnest Island Management Plan (RIMP) 2009-2014. Funds will be allocated to different streams within the RIA, internal research projects, and external research partnerships and research projects. The amount granted to each project is dependent on the research requirements, and the timelines for each project may vary. Funding applies only to pre-determined research questions as decided by the RIA each year (Appendix 2).

## **2. RESEARCH PROGRAM CATEGORIES**

### **2.1 General Research Program**

#### **2.1.1 Description**

RIA encourages researchers to develop and conduct their own research project through the General Research Program (GRP). The GRP is an initiative that enhances collaboration and facilitates the involvement of the broader research community in addressing the management goals targeted by the Authority, as well as contributing to further investigations other than those directly related to management priorities.

#### **2.1.2 Eligibility**

Applications for general research will be accepted from research and educational institutions, agencies, industry and research individuals with purposes of school group research, research-related field trips, individual, Honours and Postgraduate projects.

#### **2.1.3 Guidelines**

When applying for the GRP, the candidate is applying for permission to conduct research on the Island. For a permit to be granted, all the required information needs to be submitted for assessment. Applications must be submitted at least one month prior to commencement of research on the Island. Further information is available in Section 3: Application Guidelines, Section 4: Timeline and Section 5: Roles.

#### **2.1.4 General Research Projects**

Research conducted on the Island has the potential to contribute significantly to Island management, and all project applications are welcomed. Research can provide broad scale benefits for decision-making across the RIA with

conservation issues, commercial operations, and planning and management, as well as expanding the scientific knowledge base. Undertaking comprehensive research and monitoring in the Reserve is critical when considering the potential impacts of climate change and the need to implement risk management strategies.

The RIA has been active in supporting research that focuses on the environmental, cultural and recreational values of Rottneest Island. Research areas considered for the GRP may relate to the management of recreational activities and their impacts on the environment, shifting the Island to renewable energy resources and the protection of Island values.

Research projects may not necessarily provide outcomes solely for management purposes, but contribute with information for a bigger picture, for example, environmental baseline studies or monitoring activities. RIA suggests a list of priorities in Appendix 1. For further information on RIA management priorities and requirements, refer to the current Rottneest Island Management Plan 2009-2014 or contact the Environmental Coordinator.

## 2.2 Research Funding Program

### 2.2.1 Description

As part of the commitments of the RIMP 2009-2014 and ensuring that research on the Island has direct applied outcomes for management, the RIA is inviting researchers to submit applications to undertake predetermined funded research projects<sup>2</sup>. The Research Funding Program (RFP) has been created to encourage and support research whilst addressing gaps in existing knowledge, and provide outcomes that will be crucial to strategic management and decision-making.

### 2.2.2 Eligibility

To be eligible for admission to a RFP, you need to have undertaken or be undertaking a significant degree in university level study at the time of commencing the research. Specific entry requirements include an Honours degree or a PhD. If you are not appropriately qualified, you should consider applying for the General Research Program.

### 2.2.3 Guidelines

When applying for the RFP, the candidate is applying for a permission to conduct a predetermined research project on the Island as described in the *Research Funding Projects* in Appendix 2. Under Initiative 20 of the RIMP, the RIA will allocate funding to each project depending on the research requirements. For a permit to be granted, all the required information needs to

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<sup>2</sup> Refer to Appendix 2: *Research Funding Projects*

be submitted for assessment. Further information is available in Section: 3 Application Guidelines, Section 4: Timeline and Section 5: Roles.

#### **2.2.4 Research Funding Projects**

This program proposes a series of research questions the RIA views as a priority for conservation and environmental protection purposes. These research questions and topics will have a specific amount of funding allocated to each project. Appendix 2 provides further information on the expected physical, social or scientific outcomes, as well as the expected level of research the RIA considers is required to undertake each project.

Although all research has a direct benefit for decision-making across RIA, the purpose of funding predetermined questions is to provide specific information on key values necessary for strategic conservation planning priorities.

#### **2.2.5 Evaluation Criteria**

Applications will be assessed under the following criteria<sup>3</sup> as per the information provided in the application form:

- 1) Capacity to undertake the work,
- 2) Potential for success,
- 3) Relevance to RIA's management goals,
- 4) Level of environmental disturbance, and
- 5) RIA resources and required support.

## **2.3 Research Partnership Program**

### **2.3.1 Description**

The Research Partnership Program (RPP) provides a mechanism for collaboration between the RIA and external institutions that will address the goals of both parties. Collaboration is important to maximise resource and financial opportunities and the sharing of expertise and data assists in attaining the desired research outcomes between parties.

This program is a request for research-oriented institutions to set partnership agreements with the RIA to undertake research that is pertinent to both parties. Co-investment may include pooling resources and finances as well as sharing data, expertise and equipment or through the provision of in-kind support by the RIA.

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<sup>3</sup> Refer to Appendix 3: *Research Funding Program Evaluation Report*.



### 2.3.2 Eligibility

Institutions specialising in research and conservation are invited to propose research projects and arrange co-investment with the RIA.

### 2.3.3 Guidelines

RIA will be actively seeking research partnerships. Interested parties are encouraged to contact the Environmental Coordinator for further discussion. No application process or evaluation assessment applies, but formalised agreements may be created. Collaboration will be negotiated and arranged between the RIA and the external institution.

### 2.3.4 Research Partnership Projects

Research Partnership Projects will be designed in conjunction with the RIA to combine data and expertise, with the aim of maximising goals and outcomes. Joint projects will be expected to deliver outcomes relevant to the RIA and its research partners, with some level of co-investment required by both organisations.

## 3. EVALUATION CRITERIA

Although the same evaluation criteria apply for both Research Programs, the **RFP** projects will be competitively assessed. Only one project applicant will be granted funding to conduct a research topic from the respective list attached. The **GRP** project submissions will be assessed against the standardised evaluation criteria in the application pack.

Each RFP application will be assessed by an RIA research evaluation panel against the following assessment criteria:

- 1) **Capacity to undertake the work.** Does the individual have the capacity to address the research question? Does the institution provide adequate support, direction and appropriate supervision?
- 2) **Potential for success.** Given the objectives, methods, estimated budget and timeframe, what is the likelihood of success of the project?
- 3) **Relevance to RIA's management goals.** How do the project outcomes contribute to enhancing existing knowledge and RIA management priorities?
- 4) **Level of environmental disturbance.** Research project proposals that are extractive or potentially damaging to the environment may be declined unless the management benefits outweigh the negative impacts. This is particularly important for marine sanctuary areas.
- 5) **RIA resources and support requirements.** Does the project require any further support or assistance from RIA? Is RIA able to provide the support needed?

## **4. APPLICATION GUIDELINES**

### **4.1 Submitting an Application**

Submitting an application is a process that requires time and preparation, particularly for the RFP. You should fill out the forms carefully as the contents will be examined according to the criteria outlined above<sup>4</sup>. Please note that applications need four weeks to be processed. Late submissions may not be approved.

1) When applying, the applicant needs to fill out the **application form** and sign the **indemnity form**<sup>5</sup>, which requests:

- Personal details
- Supervisor's details
- Research proposal
- Proposal's significance to Rottnest Island
- In-kind support requested
- Timeframe
- General costs plan

2) Research proposals that require specimen removal will be required to provide detailed information including:

- The relative abundance of the species at Rottnest;
- The species conservation status or vulnerability to over-collecting and local depletion; and
- The level of environmental impact that may result from the activity.

3) If the research project requires flora and/or fauna collection or disturbance and has potential ethical issues you may need to obtain **further licensing and/or ethics approval**. The RIA cannot grant a research permit if copies of the appropriate Department of Environment and Conservation (DEC) licence, Department of Fisheries (DoF) licence, and/or appropriate Ethics approval is not provided. As of September 2010 DEC permits<sup>6</sup> are required for extractive work in both Marine & Terrestrial Reserve unless they negotiate otherwise with DoF. Department of Fisheries permits are required for any removal of marine species covered by their legislation. When involving animal or human issues researchers will need approval from their relevant Research Ethics Committee<sup>7</sup>.

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<sup>4</sup> Refer to Appendix 3: *Research Funding Program Evaluation Report*

<sup>5</sup> Refer to the following link for application and indemnity forms:

[http://www.rotnnestisland.com/en/Industry/Environmental\\_initiatives/Pages/Environmental\\_research.aspx](http://www.rotnnestisland.com/en/Industry/Environmental_initiatives/Pages/Environmental_research.aspx)

<sup>6</sup> Removal of marine and terrestrial flora requires *Form 19 (DEC)* licence. Removal of marine fauna requires a *Regulation 17 (DEC)* and *DoF* licence (if nominated species is covered under their legislation). Removal of terrestrial fauna requires *Regulation 17 (DEC)* licence. Both forms can be found at the following link:

[http://www.rotnnestisland.com/en/Industry/Environmental\\_initiatives/Pages/Environmental\\_research.aspx](http://www.rotnnestisland.com/en/Industry/Environmental_initiatives/Pages/Environmental_research.aspx)

<sup>7</sup> Ethical Conduct in Human Research: [http://www.nhmrc.gov.au/files\\_nhmrc/file/publications/synopses/e72-jul09.pdf](http://www.nhmrc.gov.au/files_nhmrc/file/publications/synopses/e72-jul09.pdf)

Australian code of practice for the care and use of animals for scientific purposes:

[http://www.nhmrc.gov.au/files\\_nhmrc/file/publications/synopses/ea16.pdf](http://www.nhmrc.gov.au/files_nhmrc/file/publications/synopses/ea16.pdf)

4) If a researcher wants to use a vehicle on the Island the University of Western Australia has a car stationed on the Island purely for research purposes. A request for a permit to drive on Rottnest Island<sup>8</sup> must be completed and forwarded to the Research Program Officer **at least 14 days prior to arrival**. Late permits will not be processed.

5) The successful applicant will need to keep their **documentation** (i.e. their approved permit) when carrying out the research project at all times and adhere to all conditions stated on the permit.

6) All work must be finished within the proposed timeline, with a copy of the final report submitted to RIA.

7) PhD and longer research projects that commence after 2012 may receive permission to extend their timeline upon request, however all permits will expire as of the 30<sup>th</sup> of June 2014.

## 4.2 Application Forms

The same application process and timeline apply for the GRP and RFP categories; however the application forms are slightly different. Please ensure you fill out the correct form for the appropriate Research Program category you wish to apply for. **Please send applications via email only to: [research.enquiries@rotnnestisland.com](mailto:research.enquiries@rotnnestisland.com).**

The following completed forms are required when applying for both Research Programs; however additional information may also be submitted:

- 1) GRP or RFP Application Form
- 2) Signed indemnity Form

Approval forms:

- 3) Copy of DEC Licence (if applicable)
- 4) Copy of Fisheries Licence (if applicable)
- 5) Copy of Ethics Committee approval (if applicable)

Additional Information:

- Details of any additional personnel
- Additional information on research project
- Any relevant additional information on project background

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<sup>8</sup> Refer to the following link for the permit application:  
[http://www.rotnnestisland.com/en/Industry/Environmental\\_initiatives/Pages/Environmental\\_research.aspx](http://www.rotnnestisland.com/en/Industry/Environmental_initiatives/Pages/Environmental_research.aspx)

#### 4.3 Closing Dates

**CLOSING DATE FOR SEMESTER ONE 2011  
APPLICATIONS: December 31<sup>st</sup> 2010**

**CLOSING DATE FOR SEMESTER TWO 2011  
APPLICATIONS:  
May 2<sup>nd</sup> 2011**

### **5. TIMELINE**

#### **5.1 Before Submitting an Application Form**

- Contact the appropriate RIA Conservation Officer for an informal discussion regarding your proposed research investigation.
- Ensure that any relevant DEC and/or Department of Fisheries permits and Ethics approval have been obtained **prior to submitting an application.**

#### **5.2 When Submitting an Application**

- Please note that the **turnaround time for processing applications is four weeks.** Applications received closer to the expected project commencement date are unlikely to be processed in time and a research permit will not be granted. RIA staff have other work priorities and consultation may be required with multiple RIA staff members to address any issues before a permit can be granted. Occasionally external advice will also be sought.
- Please fill out your application on the correct form with as much as detail as possible. Please remember to add your contact details.
- Remember to sign the Indemnity Form which is attached to the application form. Applications will not be accepted unless this form has been signed.
- **Submit completed application forms to the Research Program Officer via email only.**
- Please note that any changes to the research application after submission, e.g. extra questions requiring additions or changes in methodology will substantially increase processing time as additional consultation will be required.
- When submitting changes to a research application, please do so as an **amendment to the original form only.**

### 5.3 After Submitting a Research Application

- If a research permit and/or funding is granted, you will receive a signed permit and letter via email. This documentation will also outline any special conditions which you are required to adhere to at all times within the Marine & Terrestrial Reserve.
- The Rottnest Island Authority strongly encourages research which is of a high quality and provides information which is helpful to strategic management of the Island. Whilst most research applications are approved, on occasion applications are declined, for a variety of reasons. To avoid this situation, please contact the Research Program Officer before submitting an application to discuss your proposed project, follow the application guidelines including as much detail as possible in your application, and respond quickly to any issues raised by RIA staff after submission.
- RIA Environment staff are able to assist with technical enquires and other aspects of a research project, e.g. with Rottnest Island Driver Permits.

### 5.4 Upon Completion of the Research

- Please submit copies (hard copy and electronic) of any reports or scholarly articles produced as a result of the study to the RIA. One copy of other media produced (e.g. video, film, model, GIS data and metadata) is also required. Please note that this is required of all applicants.

**All research must be conducted and preferably finished by May 2014.**

PhD and longer research projects that commence after 2012 may receive an extension, however grant invoices and payments will need to be finalised for all projects prior to 2014. All permits will expire by the 30<sup>th</sup> June 2014.

## **6. ROLES**

### **6.1 ROLES OF THE RESEARCHER**

#### **6.1.1 Regulations**

The successful applicant must comply with the *Rottnest Island Regulations 1988*<sup>9</sup> and the *Rottnest Island Authority Act 1987*<sup>10</sup> unless the research permit states otherwise. Special conditions relating to fieldwork will be outlined in the letter sent with the permit and must be adhered to at all times.

#### **6.1.2 Reporting**

All information, data and material collected must be reported and kept for future consultation. Copies (hard copy and electronic) of any reports or scholarly articles produced as a result of the study to the RIA must be submitted. Authenticity, reliability (full and accurate representation) and integrity (complete and unaltered material) are requirements of reporting.

### **6.2 ROLES OF THE RIA**

#### **6.2.1 Communication**

The call for research proposals will be in email format, sent out via the appropriate Grants/Communication personnel of local agencies and education, government and research institutions. The Research Program will also be advertised in newspapers, on the RIA website, and in university publications.

#### **6.2.2 Accountability**

The RIA has the legal responsibility to archive all research, data and findings to allow future location and retrieving. The creation of proper and adequate records supports accountability.

#### **6.2.3 Assistance**

In addition to in-kind and financial support (where applicable), staff of the Rottnest Island Authority are available for consultation. All RIA Environment staff have university-level science qualifications, and are potentially able to assist with technical enquiries and fieldwork.

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<sup>9</sup> Rottnest Island Regulations 1988:

[http://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:16675P/\\$FILE/RottnestIslRegs1988\\_03-c0-00.pdf?OpenElement](http://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:16675P/$FILE/RottnestIslRegs1988_03-c0-00.pdf?OpenElement)

<sup>10</sup> Rottnest Island Authority Act 1987:

[http://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:16380P/\\$FILE/RottnestIslAuthAct1987\\_02-b0-00.pdf?OpenElement](http://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:16380P/$FILE/RottnestIslAuthAct1987_02-b0-00.pdf?OpenElement)



# APPENDICIES

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## Appendix 1 - General Research Projects



<b>TERRESTRIAL</b>
<b>Flora</b>
Identify the extinct flora species of Rottnest Island and investigate the potential impacts and outcomes of their reintroduction.
<b>Fire</b>
Investigate the relationships between woodland expansion and fire. Identify fire threats and potential mitigation strategies.
Examine how vegetation on Rottnest Island responds to fire.
<b>Salt Lake, Groundwater and Freshwater Systems</b>
Characterise the chemical and physical dynamics of the Island's salt lakes.
Characterise the ecological dynamics of the fauna that inhabit and utilise the salt lakes and relate to historical records and information.
Determine the natural variability of the Island's hydrological regimes, including groundwater patterns and the relationships between salinity, water levels and run-off.
Identify the invertebrates that populate the freshwater seeps and lakes on the Island.
<b>Wildlife</b>
Investigate the population dynamics of bird species on the Island (e.g. migratory birds, bush birds and shore birds/waders, pest birds), with a focus on home ranges and significant habitats.
Ascertain and develop an understanding of the fauna communities that inhabit the coastal islands and rocky outcrops of Rottnest Island.
<b>Coastal Management</b>
Identify potential impacts, issues and risks related to coastal trail development.
Investigate various dune rehabilitation and stabilisation methods.
<b>Compliance</b>
Assess the nature and intensity of visitors feeding wildlife on Rottnest Island, and identify potential ecological impacts
<b>MARINE</b>
<b>Geomorphology (Sandy Beaches)</b>
Undertake research to improve knowledge of Rottnest Island's geomorphology and identify potential climate change impacts.
<b>Seagrass Communities</b>
Examine any temporal changes in seagrass communities and identify their causes.
<b>Migratory Birds and Shorebirds</b>
Characterise the ecological dynamics of migratory bird species on Rottnest Island, with an emphasis on identifying significant habitats.
Identify the nature, level and impacts of human disturbance on bird species in the coastal zone.
<b>Sharks and Rays</b>
Identify areas of significant habitat for sharks and rays at Rottnest Island.
Assess and monitor the impact of recreational diving and fishing on shark and/or ray aggregation sites.
<b>Marine Turtles</b>
Identify areas of significant habitat for marine turtles at Rottnest Island and design a recreational diver engagement project to assist with recording turtle sightings.



## Appendix 2

### Research Funding Projects for 2010/2011



RESEARCH QUESTIONS	CONTEXT	RESEARCH LEVEL
<b><i>Wildlife and Freshwater Resources</i></b>		
<p>Characterise the freshwater hydrology of the seeps and lakes on Rottnest Island. Map the freshwater resources and undertake baseline studies of resource locations, water quality, and the fauna assemblages utilising the resource. Ascertain what the spatial/temporal influences are and identify the relationships between fauna species, freshwater resources and the quality and quantity of the resource.</p>	<p>Freshwater resources are in short supply on Rottnest Island. Wildlife including birds, quokkas, frogs and invertebrates rely on these water sources for survival and breeding. This research project will identify the locations of fresh water resources, provide further knowledge of temporal and spatial variations in water quality and hydrology, and examine the relationships between hydrological regimes and the species that utilise the sites.</p> <p><b>Expected Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Development of a spatial database including the location of freshwater resources, temporal and seasonal changes, and water quality for each resource.</li> <li>2. Identification of the fauna species utilising each resource, including information on the number of individuals and frequency of visits.</li> <li>3. Characterise the invertebrate species utilising each resource.</li> <li>4. Characterisation of the spatial and temporal patterns of fauna density in relation to resource availability and water quality.</li> <li>5. Identification of the resource attributes that attract different fauna species.</li> <li>6. Investigation of fauna water requirements and thresholds.</li> <li>7. Recommendations for appropriate freshwater resource management to ensure fauna water requirements are addressed.</li> <li>8. All data and results are to be entered into spatial databases to assist with future monitoring. Ideally, the research project will be designed to aid with future monitoring and management, and the database designed as a tool to aid management decisions.</li> </ol>	<p>PhD &amp; Honours</p>

RESEARCH QUESTIONS	CONTEXT	RESEARCH LEVEL
<b><i>Relationships Between Woodland Habitat and Wildlife</i></b>		
<p>Identify relationships between Rottnest Island woodland revegetation and remnant plots and bush bird species such as the Red-capped Robin (<i>Petroica goodenovii</i>) and Golden Whistler (<i>Pachycephala pectoralis</i>). Investigate whether the population dynamics of key bush bird species are indicative of woodland restoration success.</p>	<p>Bush bird species such as the Red-capped Robin (<i>Petroica goodenovii</i>) and the Golden Whistler (<i>Pachycephala pectoralis</i>) are generally found in taller stands of mainland vegetation including woodland and shrubland. On Rottnest Island they inhabit remnant <i>Melaleuca lanceolata</i> woodlands, most <i>Acacia</i> species woodland and some <i>Eucalyptus gomphocephala</i> plantations. The Island provides important habitat for Golden Whistlers as the population has declined significantly on the Swan Coastal Plain, particularly in the Perth Metropolitan Region. The Red-capped Robin population on Rottnest Island is an important isolated relict, widely separated from the nearest naturally occurring populations in the wheatbelt. The mainland populations have colonised parts of the coastal plain since European colonisation and the onset of severe habitat fragmentation. Populations of both species on the Island appear to be spreading from remnant woodland stands to reforested sites. The Rottnest Island Authority is currently developing indicators and measures for woodland restoration success. Examining the relationships (both temporal and spatial) between key bush bird species and reforested woodlands will assist in determining if the restoration program is also providing significant breeding and foraging habitat for bush bird species. The successful researcher will work closely with the RIA Environmental team and Birds Australia with regards to collation of data, analysis and field surveys.</p> <p><b>Expected Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Creation of a spatial database detailing bush bird sightings (both temporal and spatial), home ranges and significant habitat, and age class, density and structure of reforested areas.</li> <li>2. Identification of habitat requirements of bush bird species and map key habitats on the Island.</li> <li>3. Characterisation of the relationships between significant bush bird habitats, and the habitat requirements of key bird species.</li> <li>4. Assessment of future potential bush bird colonisation sites and estimation of when the areas would be suitable for habitation.</li> <li>5. Recommendations for future monitoring, management and revegetation programs.</li> </ol>	<p>PhD</p>

RESEARCH QUESTIONS	CONTEXT	RESEARCH LEVEL
<b>Fauna Health</b>		
<p>Identify the genetic differences between the three species of frogs found on Rottnest Island and those found on the mainland. Investigate whether the frog populations on Rottnest Island are disease free.</p>	<p>Rottnest Island supports the populations of three frog species: the moaning frog (<i>Heleioporus eyrei</i>), the western green tree frog (<i>Litoria moorei</i>) and the sandplain froglet (<i>Crinia insignifera</i>). All three species are also found on the mainland. Anecdotal evidence indicates that the Rottnest population of <i>C. insignifera</i> is morphologically distinct to those found on the mainland, as they exhibit a striped morph during warmer and drier conditions. Frog populations on the mainland are severely threatened by the disease Chytridiomycosis, which is caused by the Chytrid fungus and is transmitted via water. There is a distinct possibility that Rottnest Island water sources have not been infected by the Chytrid fungus and as a result the Island's frog populations could be completely disease-free.</p> <p><b>Expected Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Identify whether the frog populations on the Island are genetically distinct to those on the mainland.</li> <li>2. Investigation into the health of the frog populations and if they have been infected with the Chytrid fungus and other amphibian diseases.</li> <li>3. Identification and mapping of critical habitat, and an understanding of the hydrology of significant frog sites.</li> <li>4. Characterise the population dynamics for each species.</li> <li>5. Identification of relationships between the success of frog populations and the water quality and habitat type at significant sites.</li> <li>6. Development of a spatial database with the locations and attributes of critical habitat and information on population dynamics.</li> <li>7. Future management and quarantine recommendations to prevent transmission of disease onto the Island.</li> </ol>	<p>Honours &amp; PhD</p>



## **Appendix 3**

# **Evaluation Report**

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**(Internal document)**

**TITLE:**

**Rottnest Island Research Funding Program 2010-2014**

**AGENCY:**

**Rottnest Island Authority**

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## SUMMARY

ITEM	RESPONSE
1. Applicant	
2. Institution	
3. Project title	
4. Scope	
5. Preferred respondent	
6. Total funding value	
7. Annual funding value	
8. Anticipated project commencement date	
9. Number of people involved	

## THE EVALUATION

### EVALUATION PANEL PARTICIPANTS

Job Title	Agency	Voting/Non Voting Member
Senior Environmental Officer	Rottnest Island Authority	Voting
Manager – Marine & Terrestrial Reserve	Rottnest Island Authority	Voting

### APPLICATIONS RECEIVED

- 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
-

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## QUALITATIVE SCORE AND FUNDING REQUEST SUMMARY TABLE

Qualitative Requirement	Weighting			
		Raw	Weighted	
		/9	/9	%
Capacity to undertake the work	%			
Potential for success	%			
Addressing RIA's management goals	%			
Minimum disturbance	%			
RIA resources and support requirement	%			
Total Weighted Score (%)				%
Qualitative Ranking				

### DESCRIPTION

#### CAPACITY TO UNDERTAKE THE WORK

Does the individual have the capacity to address the research question? Does the institution provide adequate support, direction and appropriate supervision?

#### POTENTIAL FOR SUCCESS

Given the objectives, methods, estimated budget and timeframe, what is the likelihood of success of the project?

#### RELEVANCE TO RIA'S MANAGEMENT GOALS

How do the project outcomes contribute to enhancing existing knowledge and RIA management priorities?

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## **LEVEL OF ENVIRONMENTAL DISTURBANCE**

Research project proposals that are extractive or potentially damaging to the environment may be declined unless the management benefits outweigh the negative impacts. This is particularly important for marine sanctuary areas.

## **RIA RESOURCES AND SUPPORT REQUIREMENTS**

Does the project require any further support or assistance from RIA? Is RIA able to provide the support needed?

## **3. ENDORSEMENT BY EVALUATION PANEL**

Senior Environmental Officer

\_\_\_\_\_ Date: \_\_\_\_\_

Manager – Marine and Terrestrial Reserve

\_\_\_\_\_ Date: \_\_\_\_\_

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