

# Premium Ecotourism Products on Whitsunday Island

Feasibility study

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# 1 Background and strategic context

## 1.1 Introduction and purpose

This chapter provides a summary of the background to this Project, the details of the Project need and objectives, and identifies the key relevant documents that inform and support this study. It also outlines the alignment of this Project with other Projects currently underway or planned.

## 1.2 Background to the Project

The Queensland Government is committed to creating new opportunities for the State's burgeoning ecotourism market. Based on a 2013 Expressions of Interest (EOI) Program and benchmarking comparators from other states, the Queensland Government has decided that securing private sector ecotourism investment through government-led and site-specific approaches is the key to building Queensland's profile as a global ecotourism destination.

In the aftermath of Tropical Cyclone Debbie, a \$7.3 million capital investment package from various sources was committed to deliver new, alternative and upgraded visitor facilities within the Whitsunday Islands National Park. This initiative has already delivered walks in the South Molle, Langford and Border Islands, with works underway in Hill Inlet and Whitehaven Beach. Construction work has started on a \$2.78 million multi-day walk, Whitsunday Island Trail, from Whitehaven Beach to Tongue Point in December 2018.

An additional \$5 million has been committed by the Queensland Government for the establishment of premium ecotourism facilities on Whitsunday Island. This project aims to support that endeavour, and upon the completion of the study will allow the Department of Environment and Science (DES or the Department) to move forward with a suitable ecotourism project.

The Queensland Government, through DES, sought the development of a feasibility study and a detailed consultation report for potential premium ecotourism products, including eco-friendly accommodation options Whitsunday Island (the Project). The Queensland Government's focus is primarily on pursuing an increased number of premium ecotourism options to maximise economic benefit for the region while cementing Queensland's reputation as an international ecotourism destination.

This feasibility study aims to assess the viability of a low-impact project that will deliver environmentally friendly accommodation, connecting walking tracks and other exceptional ecotourism offerings. It will also outline the strategic, economic, ecological and commercial contexts of the Project, and undertake an options analysis and consideration of the preferred procurement process. It will also involve an analysis of the prevailing market conditions for these products and will make a series of final recommendations on the overall feasibility of the Project.

A Project team was assembled for the delivery of this feasibility study, led by Aurecon and supported by PwC, EarthCheck and Tulipwood Economics. The findings and recommendations in this document reflect the position of the Project as at the date of submission of this feasibility study on 17 January 2019.

## 1.3 Governance

The governance structure for this Project, illustrated in Figure 1, was adopted for this feasibility study to guide and inform decision making and to facilitate a transparent and accountable reporting framework.

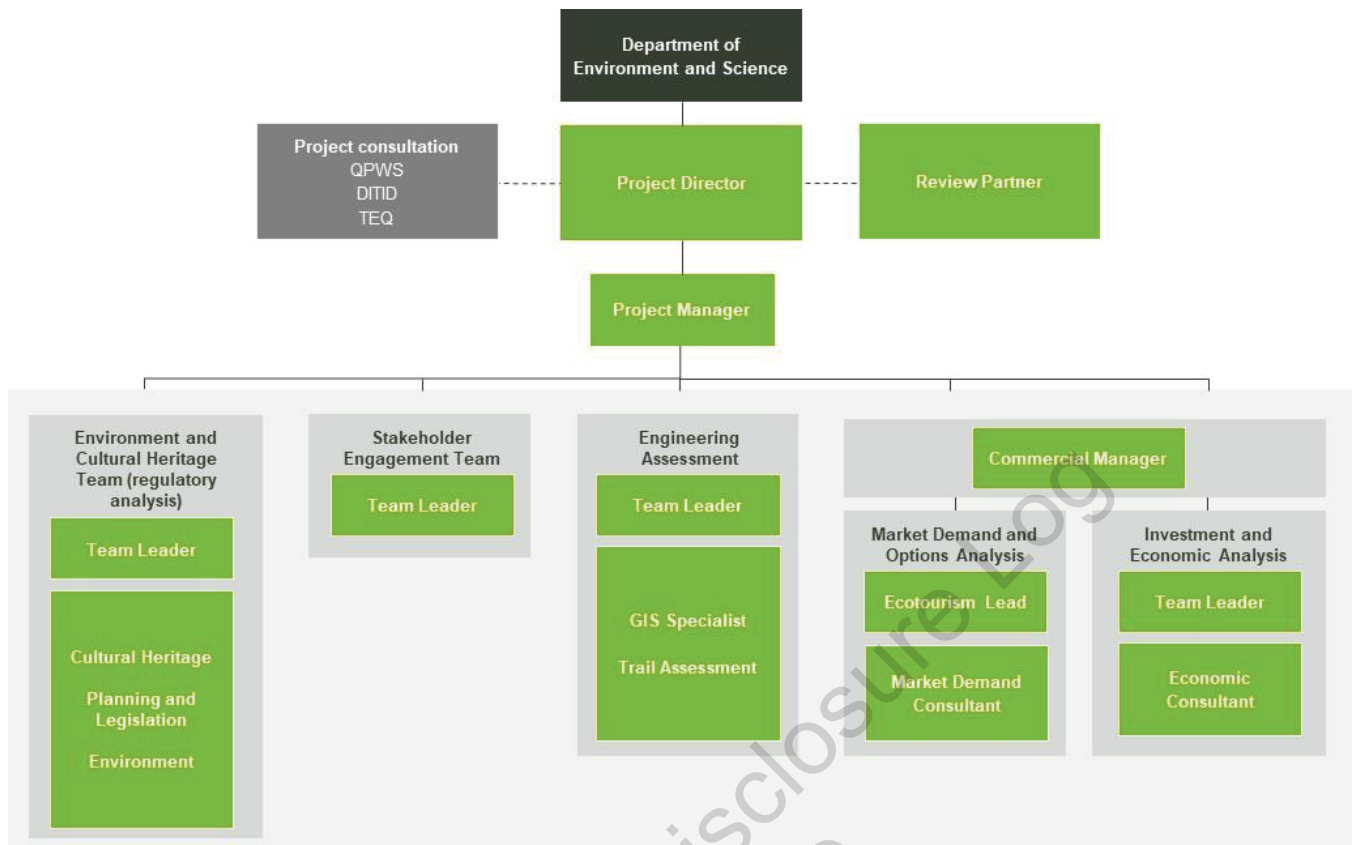


Figure 1 Governance structure

## 1.4 Location

Whitsunday Islands National Park is one of Queensland's iconic parks and is valued internationally for its outstanding scenic beauty, including Whitehaven Beach. It is part of the broader group of islands in the Whitsunday region specifically mentioned for the 'magnificent vista of green vegetated islands and white sandy beaches spread over azure waters' in the 1981 listing of the Great Barrier Reef World Heritage Area by UNESCO.

Whitsunday Island itself is the largest island in the archipelago, measuring 275 square kilometres and is located approximately six nautical miles off the coast of Central Queensland. It can be accessed by motorised and non-motorised watercraft, primarily from the mainland ports of Airlie Beach and Shute Harbour, and by aircraft from local airports.

The islands receive between six to eight hundred thousand visitors per year,<sup>1</sup> which makes the archipelago one of the most popular tourist attractions in Queensland.

The park is rich in cultural heritage and is of special value to the Traditional Owners, the Ngaro people, who maintain their cultural connection to the islands and surrounding sea country.

<sup>1</sup> <https://www.tourismwhitsundays.com.au/images/Research-Insights/Whitsundays/Whitsundays-Regional-Snapshot-YE-Dec-2017.pdf>



Figure 2 Aerial view of Whitsunday Island

## 1.5 Project need

The Whitsunday region has been identified as a key investment location to assist in the economic and social recovery of North Queensland following Tropical Cyclone Debbie. The capital investment package has been committed through DES and the Australian Government to fulfil both purposes.

The vision of the Queensland Government is to create new ecotourism opportunities that not only provide economic benefit for the state but also preserve our unparalleled natural and cultural assets for future generations. Despite Queensland's many opportunities for growth, much of the state's potential for tourism and sustainability remains untapped, particularly the ecotourism market.

As the world population continues to grow and urban environments emerge proportionate to that growth, nature-based ecotourism will draw in ever-larger numbers of local and international visitors. Queensland currently has over three hundred national parks across nine million hectares. A key part of providing the funds to preserve these assets is sustainable ecotourism projects that simultaneously preserve these environments and generate revenue for regional Queensland.

A major focus of ecotourism for the Queensland Government is to educate and inform visitors, which contributes to both the local community and the conservation of natural areas. Business plans and modelling for ecotourism facilities must ensure that these needs are met, while also balancing the traditional considerations of tourism offerings.

The key benefits associated with this Project include:

- Showcasing Queensland's natural and cultural values
- Delivering ecologically and economically sustainable experiences that are low-impact
- Creating local employment prospects, including opportunities for Traditional Owners
- Providing economic benefit for communities and existing tourism operators
- Facilitating ecotourism, recreation, education and heritage experiences.

## 1.6 Project objectives

The overarching Project objectives for this feasibility study are outlined below:

- A thorough options analysis which identifies a preferred option/s for eco-accommodation on the Whitsunday Island Trail, including delivery model analysis and identification of private investment opportunities
- A social, community, and key stakeholder engagement program which identifies and mitigates any risks and integrates feedback to ensure Project success

- The production of an environmental and cultural heritage assessment that is fully aligned with the values of the DES, that follows legislative and planning requirements, and that ensures ongoing sustainability and consultation with the Traditional Owners
- A market demand, cost-benefit and economic impact analysis which strengthens the case for investment while also demonstrating tangible and relatable benefits associated with the Project.

## 1.7 Policy context

This feasibility study will identify several key focus areas that the Queensland Government must be aware of when deciding how to best allocate the capital investment package budget. These concerns include integration with the capital investment package aims, environmental sustainability, cultural heritage, social and community benefits and market demand analysis. The Project must also proceed in alignment with relevant policies and strategies, including:

- A Master Plan for Queensland's Parks and Forests to 2025<sup>2</sup>

The Master Plan is a living document intended to provide a blueprint of park and forest management until 2025. It aims to preserve the natural and cultural heritage of Queensland, and work with the Traditional Owners of the land to achieve this goal. It was formulated to address a variety of challenges, including the need to balance the tourism industry with improved conservation, maintain the delicate ecosystems and environments of Queensland, and sustainably build partnerships and relationships with the wider community.

- Queensland Ecotourism Plan 2016-2020<sup>3</sup>

The Queensland Ecotourism Plan sets out the Queensland Government's vision for sustainable ecotourism growth throughout the state. The plan aims to foster best practice, innovative ecotourism development that will provide lucrative revenue streams while positively contributing to Queensland's natural assets. This plan focuses on the need to protect the Great Barrier Reef and other Northern Queensland environmental landmarks. Its final priority is to engage with visitors in a way which will raise the profile of the World Heritage areas throughout Queensland and raise support for their continued conservation.

- Implementation Framework – Ecotourism Facilities on National Parks<sup>4</sup>

This implementation framework ensures that Queensland's natural competitive advantage within the ecotourism industry is fully realised. It recognises the importance of low-impact ecotourism facilities which operate to the highest environmental standards and industry practices. The framework provides a model for assessing and approving proposals for ecotourism facilities in national parks. It does this based on several criteria, ranging from environmental to social to financial. The framework also envisions cooperation with key stakeholders, particularly Traditional Owners.

- Best Practice Ecotourism Development Guidelines<sup>5</sup>

This document outlines the specific approaches required to meet best practice standards for ecotourism. It is designed to assist Applicants who wish to secure approval for an ecotourism proposal in preparing their responses to the application forms. The Best Practice Guidelines provide background and tools which direct Applicants through the steps and requirements to ensure their proposal meets best practice requirements.

- Queensland Ecotourism Development Toolkit<sup>6</sup>

The Ecotourism Development Toolkit is a document specifically aimed at developers and investors. It is an informative report created in consultation with key landholding agencies, investors, and other crucial stakeholders in the tourism industry for the purpose of streamlining the investment process and answering crucial questions. It focuses on significant issues like site selection, land tenure, development design, and the overarching need to reduce impacts on sensitive environments.

<sup>2</sup> <https://www.ecotourism.org.au/assets/Resources-Hub-Protected-Area-Management/a-master-plan-for-queenslands-park-and-forests.pdf>

<sup>3</sup> <https://www.npsr.qld.gov.au/tourism/pdf/final-qlc-ecotourism-plan.pdf>

<sup>4</sup> <https://www.npsr.qld.gov.au/tourism/pdf/ecofacilities-framework.pdf>

<sup>5</sup> <https://www.ecotourism.org.au/assets/Resources-Hub-Ecotourism-Plans/Best-Practice-Ecotourism-Development-Guidelines-2015.pdf>

<sup>6</sup> <https://publications.qld.gov.au/dataset/queensland-ecotourism-development-toolkit>

- Premium ecotourism flowchart

The Premium ecotourism flowchart (contained in Appendix A) is a multi-stage breakdown of how an ecotourism project should develop from feasibility study to implementation. It identifies the necessary steps to be taken and the factors which influence these steps.

## 1.8 Alignment with other projects

The success of this Project will represent a crucial step in the recovery process of Northern Queensland following the impacts of Tropical Cyclone Debbie and a stepping stone to future success in the ecotourism market.

DES are partnering with the Department of Innovation, Tourism Industry Development and Commonwealth Games (DITID) and Tourism Events Queensland (TEQ) to deliver new ecotourism infrastructure in the state's most iconic regions, including on and adjacent to Queensland's national parks. Projects currently under investigation by the Queensland Government are listed below.

### 1.8.1 Wangetti Trail

The Wangetti Trail is a premium ecotourism offering; a 76-kilometre dual-use track which stretches along the coastal plains and mountain hinterland between Palm Cove and Port Douglas. It aims to be a Nationally Significant Trail, ranked within the top ten Trail experiences domestically and a world-class attraction.

### 1.8.2 Cooloola Great Walk – Great Sandy National Park

A plan to develop ecotourism products along the existing Cooloola Great Walk and further link the multi-day walk with the Noosa everglades so that visitors have the opportunity to complete a return journey either on foot or by water (via canoe or kayak).

### 1.8.3 Thorsborne Trail – Hinchinbrook Island National Park

A plan to develop ecotourism products along the existing Thorsborne Trail multi-day walking track, taking advantage of the existing trail and infrastructure, while also developing new 'spur' walks off the Thorsborne Trail to iconic points of interest such as Mount Bowen.

### 1.8.4 Gold Coast hinterland

An ongoing investigation of suitable ecotourism multi-day walk options within the Gold Coast hinterland.

## 1.9 EOI process

DITID conducted an EOI process commencing on 12 October 2018, which sought interest from the market on a number of trails in Queensland, including the Whitsunday Island Trail, the Cooloola Great Walk on the Sunshine Coast and the Thorsborne Trail on Hinchinbrook Island National Park as part of a whole-of-government approach to trails.

The Queensland Government intends to partner with the private sector, local governments and Traditional Owners to develop a series of world-class trails. The EOI process is the first step in engaging private investors and tourism operators to help the Queensland Government develop appropriate, sustainable, and highly successful best practice tourism experiences.

Market sounding has shown that there is significant interest from tourism operators and investors to expand the ecotourism market in Queensland. In particular, nature-based tourism in and around national parks is an area of heavy growth.

Ideally, this process will represent the first step in expanding the ecotourism offerings in Queensland and provide both a valuable source of environmentally and culturally sustainable revenue to the Queensland Government and an exciting commercial opportunity to private investors.

## 2 Methodology

### 2.1 Introduction and purpose

This chapter describes the approaches underpinning the feasibility study development process for this Project.

### 2.2 Risk analysis

This chapter sets out the approach to risk analysis for this Project, outlining the risk parameters, and assessment of the risks contained within the risk register prepared by DITID and adapted by DES for this Project. Details are provided on those risks that remain residually high or extreme despite mitigation.

The Project risk register covers a range of types of risks and identifies risks and mitigation strategies, using qualitative and quantitative assessment techniques to determine the materiality of each risk and the impact on the Project cost estimates.

Finally, the study includes a commercially focused preliminary risk allocation for Project risks. The appropriate risks identified are incorporated into the cost estimates via a Monte Carlo simulation to determine the P50 cost.

### 2.3 Environment overview

An Environmental and Cultural Heritage Assessment was completed consistent with the values identified in the *Whitsundays Plan of Management 1998: includes the 2017 amendment as in force 1 January 2018* (WPOM) and the *Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013*.

This assessment involved a three-step process:

- Desktop review
- Field inspection
- Reporting.

This process was undertaken to ensure the final feasibility study highlights the expected environmental impacts and possible acceptable solutions. The environmental assessment of national park values was consistent with the Department's Values-based Management Framework.

Consultation was undertaken directly with the Whitsunday-based Queensland Parks and Wildlife Service (QPWS) rangers to obtain data and knowledge based on their 'day-to-day management' experience on Whitsunday Island. The results of this consultation ensured that the outcomes of this study are applicable to the Whitsunday Island's management and are detailed below.

A desktop review and gap analysis were undertaken to identify existing and/or potential ecological constraints within Whitsunday Island. This review also informed the Project about where additional information needed to be collected to ensure a comprehensive assessment of possible constraints for each proposed area.

The desktop review was undertaken by searching online databases and investigating relevant spatial information. The review of these desktop resources provided a preliminary assessment of possible issues or constraints to the proposed developments and activities on site such as biodiversity status and threatened species.



Using digital spatial capabilities, a heat map was developed on the constraints to identify available land for development.

### Field inspection

Fieldwork was required to determine the presence, absence and/or extent of potential environmental issues following the shortlisting of options.

Field inspections included:

- Vegetation and incidental fauna surveys
- An overall habitat and landscape assessment.

The feasibility study details likely Australian and Queensland Government assessment triggers and lists the assumed level of impact significance of each proposal. In addition, it includes details of any proposed monitoring during feasibility, design, construction and operational stages.

This study also contains a concise environmental assessment chapter summarising the outcomes of the desktop review covering:

- An assessment of the existing environment
- The presence of natural values, and their relative protection requirements based on the Department's Values-based Management Framework
- Mitigation strategies to manage environmental values identified within the proposed area
- Attractive and/or significant landscape values, in line with the DES Landscape Classification System for visitor management.

## 2.4 Cultural heritage overview

A Cultural Heritage Assessment was completed consistent with the values identified in the *Whitsundays Plan of Management (WPOM)* and Management Statement.

This assessment involved a three-step process:

- Desktop review
- Consultation with Traditional Owners
- Reporting.

This process was undertaken to ensure the final feasibility study highlights the expected cultural heritage impacts and possible acceptable solutions.

The Project team worked with DES on the best approach to consultation with the Ngaro people regarding the Cultural Heritage Assessment, guided by the Community and Stakeholder Plan.

A desktop review was undertaken to identify existing and/or potential cultural heritage constraints within the Whitsunday Island region. This review also informed the Project about where additional information needed to be collected from to ensure a comprehensive assessment of possible constraints.

The desktop review was undertaken by searching online databases. The review of these desktop resources provided a preliminary assessment of possible issues or constraints to the proposed developments and activities on site, such as areas of cultural heritage and significance.

This study also contains a concise cultural assessment chapter summarising the outcomes of the desktop review covering:

- The presence of natural and cultural values, and their relative protection requirements based on the Department's Values-based Management Framework
- Mitigation strategies to manage cultural values identified within the proposed area.

## 2.5 Legislative overview

As part of the environmental and cultural heritage assessment report, a legislative review of applicability of various pieces of legislation and policy was undertaken, including how they will affect the proposed premium ecotourism products.

As part of this process, relevant Australian and Queensland Government legislation and Departmental policy and guidelines were reviewed and assessed. This assessment provided crucial inputs into the options analysis.

## 2.6 Social impact assessment

A Social Impact Assessment (SIA) was developed, tailored to the specific characteristics of the Project. The SIA recognised that potential societal impacts of the Project may vary in type or materiality for alternative options, assuming that the boundary for this aspect of the study is Queensland.

The SIA process included:

- Developing a clear Social Impact Baseline to be used to assess the social impacts of the Project, tailored as appropriate to each alternative ecotourism option
- Identifying and describing potential social impacts of the Project, based on key social impact categories and engagement with relevant stakeholders
- Identifying potential social impacts expected to be capable of being monetised as part of the economic analysis
- Identifying expected material social impacts recommended for further detailed (and potential quantitative) assessment as part of the next phase of the Project's development (such as a Business Case or value for money assessment of market responses)
- Completing a comprehensive Impact Risk Assessment. This will provide a qualitative description of social impacts. It will also support identification of relevant social impacts for consideration as part of the CBA or for potential quantification in a Business Case or further detailed analysis
- Facilitating the identification of potential opportunities, which can result in options being tailored to optimise the social benefits to the region.

## 2.7 Stakeholder and community consultation

This study includes a purpose-built Stakeholder and Community Consultation Plan, including mapping of key stakeholders and their interests to provide high-level input to the feasibility study.

The aim was to capture the inputs of stakeholders to establish a vision for ecotourism on Whitsunday Island – what is valued, what should be protected, what should be highlighted and potential opportunities. These inputs then supported options development and assessment and led seamlessly into future engagement stages. The stakeholder and community consultation considered existing developments with the trail already under construction, as well as concurrent work on the Wangetti Trail, a long-distance trail connecting Palm Cove to Palm Douglas.

Additionally, a specific consultation plan was developed and implemented for the Ngaro people as part of the Study. The aim of the consultation was to inform the cultural heritage assessment, identifying cultural heritage values on Whitsunday Island and in particular the development sites, and also to assess the potential for feasibility of the Ngaro people's involvement in the ecotourism opportunities.

The Plan incorporated the following core engagement mechanisms:

- Stakeholder mapping to ensure all stakeholders critical to decision making were provided the opportunity to be involved
- Email contact with all stakeholders inviting participation in an online survey to establish the Vision for Ecotourism on Whitsunday Island

- Summary of outputs to stakeholders for further input and comment to allow cross-fertilisation of ideas and visibility of all inputs that will be used to develop options.

## 2.8 Market demand analysis

The feasibility study includes market demand analysis that incorporates:

- A review of the Whitsunday region current visitor market and product mix. In addition to potential ecotourism developments attracting new visitors, a consideration was the potential impact on existing visitors' markets (potential to extend length of trips, substitute existing experiences)
- Forecast tourism demand to the destination over the next 10-year period
- A review of domestic and international ecotourism markets, identifying trends and visitor motivations in consuming ecotourism experiences
- An understanding of the varying requirements of different market sectors, including: luxury walking experiences, long distance walking experiences and the casual leisure market (short walks and other experiences)
- Identification of appropriate best practice comparators, including an assessment of their impact on the marketplace
- Review of demand for the provision of overnight 'roofed' accommodation.

A clear understanding of the current market profile and anticipated demand based on new experiences and product development opportunities informed options development and provided key inputs for economic modelling and impact analysis.

## 2.9 Options analysis

Several options were explored and established - these involved concepts based on commercial walking/trail experiences, roofed accommodation options, activity options or pop-up/temporary experience options.

In establishing the options, the following process and steps were included:

### **Levels of Service (LOS) and infrastructure/design specifications**

The infrastructure standards and servicing requirements (Levels of Service) along the trail were outlined. This process included an assessment of the trail sections against Australian walking track standards and target market needs. The Levels of Service provided the basis to identify the infrastructure provisions and design specifications for various locations along the trail.

### **Pre-feasibility study to verify the commercial potential for roofed accommodation and other commercial opportunities**

The Project Team identified an accommodation mix that aligned to the Queensland Government's vision for provision of premium ecotourism products and the commercial potential of accommodation along the trail. This process identified an appropriate accommodation mix including hiker camps and accommodation in various trail sections. The effect of the provision of commercial accommodation along the track is outlined in the report.

### **Experience/activity options**

A wide spectrum of experience options and activations were considered, appropriate to the environmental considerations and market opportunities.

### **Environmental/Cultural Heritage factors**

Opportunities and constraints were identified from environmental and cultural assessments.

## Multi Criteria Analysis

A Multi Criteria Analysis (MCA) is a robust and systematic approach to ranking a longlist of options to a shortlist. It allows stakeholders' views to be captured and quantified in a collaborative forum.

Criteria were confirmed to assess the options based on desired outcomes resulting from the preliminary market sounding outcomes. Specific criteria are listed below in the options analysis, along with the results of the MCA workshop conducted with the aim of obtaining a consensus view on the most appropriate options for further consideration.

## 2.10 Construction and operational costs

A capital and operating cost estimate was developed to quantify the costs for planning, engineering procurement, project management and construction management of the proposed ecotourism infrastructure.

The cost estimate contains details of a range of costs that could be applicable to the Queensland Government or private sector development, with the ultimate decision on the party that bear specific costs to be further investigated through the EOI process. The cost estimate is intended to provide a baseline.

The cost estimate was broken down with the following inputs and considerations:

- Data collection
- Safety and environmental assessments
- Civil, structural, mechanical and electrical engineering assessments
- Drafting
- Technical Specification Development for market prices
- The use of local suppliers (if available) and specific to island destinations in the Whitsunday region.

The scope of work sections for the Project was divided into equipment-based Work Breakdown Structures (WBS), for the identified plant to detail out the Project elements using the following techniques to develop the estimate:

- Turn key budget quotes for supply and installation were obtained where possible
- Where quoted equipment only supply costs are obtained, installation costs were estimated based on comparative projects
- Empirical rates utilised for tonnage and volumes estimated from site details and similar projects where appropriate
- Each item has an individual contingency provision applied to it to capture potential cost variations for unaccounted or intangible construction issues
- Each item level noted with the accuracy consistent with the level of engineering able to be completed in the available time.

Based on conceptual trail alignments and trail features, costings made use of all the information obtained throughout the desktop assessment process and prior construction knowledge relating to other projects constructed around Australia.

## 2.11 Cost benefit analysis and economic impact analysis

The Cost Benefit Analysis (CBA) assesses incremental costs and benefits of a project to broader society, beyond the direct value impacts considered as part of a financial analysis. For a feasibility study, the primary purpose of a CBA is to support identification of a preferred option(s) for further analysis.

An effective and reliable CBA requires clear definition of a Base Case option, against which the various project options can be compared. The Base Case is the 'do minimum' option, and for the economic analysis, the Project Case is assessed as incremental to the Base Case. We engaged with relevant stakeholders to develop the definition of the Base Case for the Project.

The CBA process included:

- Identifying and describing key economic costs and benefits applicable to Project options, including direct Project costs and benefits
- Undertaking a preliminary literature research and identifying data to support quantification or valuation of incremental costs and benefits
- Undertaking a preliminary valuation of the economic benefit of Project options using a discounted cash flow methodology, including direct and indirect incremental costs and benefits which are readily valued (with initial sensitivities)
- Preparing a qualitative assessment of indirect incremental costs and benefits (which may be able to be quantified in further analysis).

The key output of the economic CBA for the feasibility study was the robust comparative assessment of the expected scale of incremental economic benefit or dis-benefit between preferred Project options.

### **Set appraisal framework**

The economic appraisal is compliant with Building Queensland CBA Guidelines, the Project Assessment Framework guidelines and the Infrastructure Australia (IA) Assessment Framework. The economic analysis framework has been developed based on CBA methodology to provide key decision criteria including Benefit to Cost Ratio (BCR), Net Present Value (NPV), First Year Rate of Return (FYRR) and Internal Rate of Return (IRR). These frameworks provide guidance on key input parameters including appraisal period (expected to be 30 years), discount rate (7% real, with sensitivity tests at 4% and 10%) and value of benefits (such as increased tourism expenditure).

An overarching requirement of most economic appraisal guidelines and a fundamental principle of CBA is to measure the impact on the community as a whole. This involves identifying, and where possible quantifying all costs and benefits directly attributable to an initiative.

### **Quantifying direct costs**

The major economic costs have been outlined, and primarily include capital costs associated with construction, ongoing operations and maintenance. Other notable costs include the impact of construction and operations on the local environment.

### **Quantifying direct benefits**

The primary benefits from the Project will accrue from increased tourism expenditure in the region. The study includes estimations of the incremental number of visitors to the region as a result of the trail as well as increased length of stay of existing visitors. This analysis examines the incremental expenditure to Queensland as a result of the Project and does not include expenditure which would otherwise have also been spent in Queensland (i.e. if a tourist decides to visit the Whitsunday region but would otherwise have visited another destination in Queensland, this expenditure was not included).

### **Qualitative benefits or costs**

CBAs rely on the quantification and monetisation of economic benefits or costs, however it is not always possible or feasible, to monetise all of these impacts. The study includes a qualitative costs and benefits register, and the decision-making criteria (for example, BCR) have been considered in collaboration with the qualitative costs and benefits.

### **Results and sensitivity analysis**

The final step in the CBA process was to combine the costs and benefits and produce the required decision-making metrics including NPV, BCR, FYRR and IRR. These metrics enabled the assessment of the base case and options on a like for like basis to enable informed investment decisions. FYRR estimates also assisted with decisions related to timing and staging.

The analysis includes sensitivity testing of key economic appraisal inputs and assumptions. Analysis of key input and model parameters, along with discussions with key Project stakeholders identified those most critical to the CBA results, along with appropriate ranges of variance.

## **Economic impact analysis**

An Input-Output model was prepared to measure the impact of the Project on the economy, based on value added irrespective of whether it is 'net beneficial' or not.

The Economic Impact Analysis (EIA) will provide an overview of key economic variables, including industry output, employment by industry and region (both during the construction phase and operational phase of the Project), and Gross Regional Product.

## **2.12 Delivery model/private investment opportunities analysis**

The study includes a delivery model analysis for inclusion in the feasibility study, assessing the potential commercial and management/operating models and carried out a market sounding of potential delivery partners to understand their views on potential delivery models and the market's appetite.

A detailed market sounding process was undertaken with potential operators to explore delivery model options, and their willingness/appetite for each model option.

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## 4 Environment overview

### 4.1 Introduction and purpose

To inform the feasibility study for premium ecotourism products on Whitsunday Island, a desktop review was completed to identify expected environmental constraints, and a copy of all references for this chapter are contained within Appendix C.

This report includes the following:

- A summary of the consultation with various stakeholders, including Whitsunday-based Queensland Parks and Wildlife Service (QPWS) Project Officers and relevant threatened species subject matter experts
- A desktop review including online databases searched and relevant spatial information
- A 'heat map' of the identified environmental and heritage constraints.

Following the completion of the desktop environmental assessment and the options analysis, a detailed environmental assessment was undertaken on two potential eco-accommodation sites on Whitsunday Island (Hill Inlet and Torres Herald). The findings of this detailed assessment are contained in Appendix D.

### 4.2 Whitsunday Island – features and values

#### 4.2.1 Context

Whitsunday Islands National Park (NP) protects 32 islands including Whitsunday, Black, Hook and Linford Islands. Whitsunday Islands National Park is one of Queensland's most iconic parks and is valued internationally for its outstanding scenic beauty. The Great Barrier Reef Coast Marine Park and the Queensland Island National Parks form part of the Great Barrier Reef World Heritage Area.

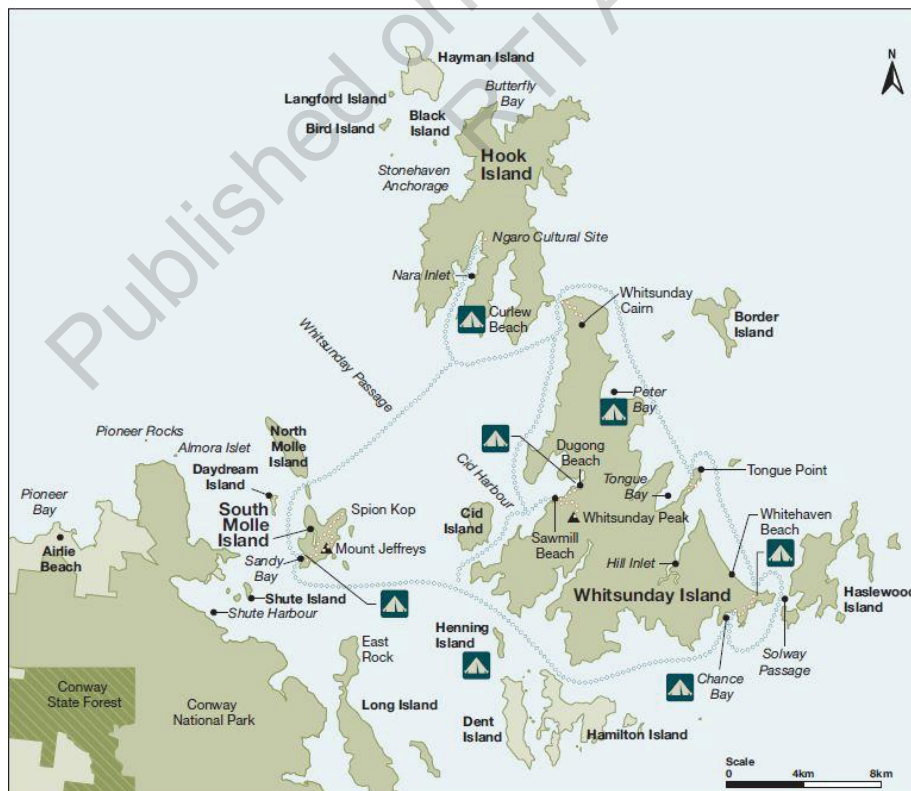


Figure 4 Map of Whitsunday Islands National Park (Source: QPWS 2018)

## 4.2.2 Management

National parks, including heritage sites and artefacts, are protected areas under the *Nature Conservation Act 1992* (Qld) (NC Act). Whitsunday Islands National Park (NP) is managed by QPWS in accordance with *Whitsunday and Mackay Islands Visitor Management Strategy* (QPWS 2007) as a high-use visitor site and under the *Whitsundays Plan of Management 1998: includes the 2017 amendment as in force 1 January 2018* (WPOM) (GBRMPA 2018).

Whitsunday Island is also within the Great Barrier Reef World Heritage Area (GBRWHA) and its intertidal areas and surrounding waters are within the State Great Barrier Reef Coast Marine Park and Commonwealth Great Barrier Reef Marine Parks.

Under the *Great Barrier Reef Intergovernmental Agreement 2015*:

- The Australian Government is responsible for:
  - the management of the Great Barrier Reef Marine Park, established under the *Great Barrier Reef Marine Park Act 1975*; and
  - regulating activities under the *Environment Protection and Biodiversity Conservation Act 1999* having or likely to have a significant impact on matters of 'national environmental significance' as defined by the Act, and on the environment within Australian land and waters.
- Queensland is responsible for:
  - the management of the Great Barrier Reef Coast Marine Park, which is established under the *Marine Parks Act 2004* (Qld); and
  - natural resource management, land use planning and regulation of activities on the islands within the Great Barrier Reef World Heritage Area.

QPWS is responsible for the 'field management' - planning, managing and regulating activities – in partnership with the Great Barrier Reef Marine Park Authority (GBRMPA).

The *Whitsundays Plan of Management 1998: includes the 2017 amendment as in force 1 January 2018* (WPOM) sets the management intent of the Whitsunday Planning Area within the Commonwealth Great Barrier Reef Marine Park with a focus on the world heritage values. The QPWS's *Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013* provides specific actions and guidelines for the Island's management.

## 4.2.3 Natural features

Whitsunday Island is recognised for the following natural features:

- Dune communities: Dunes on Whitsunday Island host several significant and restricted vegetation communities
- Open forest and shrubland: Open shrublands add to the scenic mosaic of vegetation on the Whitsunday islands and are a habitat for several significant species. Whitsunday Island, Lindeman Island and Gloucester Island National Parks combined contain 78% of the occurrence of this ecosystem in Queensland's protected areas.
- Hill Inlet estuarine wetland: The estuarine wetland of Hill Inlet on Whitsunday Island is unique within the group of island parks, being the most substantial wetland present on any island. It is also habitat for several significant regional ecosystems and species, including migratory shorebirds.
- Grasslands: Grasslands add to the scenic mosaic of vegetation on the Whitsunday islands and are habitat for several significant species
- Fringing reefs: Coral reefs are the cornerstone of the Great Barrier Reef ecosystem. In comparison to other reef types, fringing reefs are limited throughout the Great Barrier Reef Marine Park (GBRMP) but are well represented in the Whitsunday area
- Hilly topography, including Whitsunday Craig, Whitsunday Peak and Whitsunday Craig.



## 4.2.4 Recreation and tourism

### Overview

The Whitsunday Island is the largest island in the '74 Island Wonders' in the Whitsunday area, and caters for day-trippers and overnight visitors. Campers must be self-sufficient and need to book sites and purchase permits through the QPWS booking system in advance. Visitor numbers are limited to ensure a quality experience.

Access to Whitsunday Island is either via commercial operators (including boat charters, seaplane, or kayak) or private vessel. Tides and wind influence access with a large tidal range restricting access to some of the island's beaches.

Whitehaven Beach and Hill Inlet are of exceptional natural beauty. Whitehaven Beach is specifically given as an example for the criteria for OUV 7 in the GBRWHA listing. Marketed internationally, it is an iconic tourist destination and is one of the most recognisable natural sites in Australia.

Tongue Point is also an extremely popular visitor spot with lookouts and walking tracks that offer views to Whitehaven Beach and Hill Inlet. Visitors can only arrive at Tongue Point by boat.

### Walking tracks

Walking tracks on Whitsunday Island vary in skill level required and in length. Current walking tracks on the island include:

- Solway Circuit at Whitehaven Beach – 1.2 km return to a lookout
- Chance Bay to Whitehaven Beach – 7.2 km
- Hill Inlet at Tongue Point to multiple lookouts – 1.3 km return
- Lookout Beach track at Tongue Point – 500 m return
- Dugong Beach to Sawmill Beach – 3 km return
- Whitsunday Peak from Sawmill Beach – 5 km return
- Cairn Beach to Whitsunday Cairn lookout – 4 km return.

The tracks form part of the Ngāro Sea Trail which include a seaway and is a popular kayak activity.

### Activities

There are six campgrounds on Whitsunday Island, located at:

- Cairn Beach
- Dugong Beach
- Nari's Beach
- Joe's Beach
- Chance Bay
- Whitehaven Beach.

The facilities are limited to toilets and picnic tables. The main day use areas are at Dugong Beach and Whitehaven Beach.

A number of commercial operators offer tours to sites throughout the Whitsunday Islands National Park including kayaking, sailing and snorkelling. Other popular recreational activities on Whitsunday Island include:

- Boating, personal water craft and fishing
- Swimming and snorkelling
- Bird watching.

## Public moorings

Public moorings are available to all reef users and are installed at popular locations. Blue beehive shaped buoys attached to the moorings have a colour-coded band explaining the class (vessel length), time limits and maximum wind strength limits applicable to the mooring. A summary of the available public moorings around Whitsunday Island is provided below.

**Table 3 Number, type and location of public moorings around Whitsunday Island**

Location		Class and rating of mooring					Reef Protection Area (RPA)
		6m – tender only (T) Max wind speed 24 kts	10m – monohull 9m – multihull (A) Max wind speed 24 kts	20m – monohull 18m – multihull (B) Max wind speed 34 kts	25m – monohull 22m – multihull (C) Max wind speed 34 kts	35m – monohull 30m – multihull (D) Max wind speed 34 kts	
Cairn Beach	2		2				✓
Peter Bay	2						✓
Tongue Bay			5	4	5		

### 4.2.5 Other infrastructure

The following organisations have authority under the NC Act to have infrastructure on Whitsunday Island:

- Telstra Corporation Limited has access authority at Mount Robinson for establishing, operating and maintaining a communication tower
- Volunteer Marine Rescue and Maritime Safety Queensland also operate a tower at Mount Robinson allowing the operators and its contractor's access for establishing, operating and maintaining a communication tower.

Access for these operations is undertaken solely by helicopter, using the designated helipad in the authority area.

## 4.3 Desktop assessment of the existing environment

### 4.3.1 EPBC Act Protected Matters report

A search was completed of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool for the study area and a buffer zone. A central point was defined in the middle of the study area, and a 10 km buffer was searched.

A copy of the search results is enclosed in Appendix E and summarised below.

**Table 4 Summary of EPBC Protected Matters search tool results**

Matter	Result
<b>Matters of National Environmental Significance</b>	
World Heritage Properties	1 – Great Barrier Reef
National Heritage Places	1 – Great Barrier Reef
Wetlands of International Importance	None
Great Barrier Reef Marine Park	5
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	None
Listed Threatened Species	22
Listed Migratory Species	40
<b>Other matters protected by the EPBC Act</b>	
Commonwealth Land	None
Commonwealth Heritage Place	None
Listed Marine Species	78
Whales and Other Cetaceans	12
Critical Habitats	None
Commonwealth Reserves Terrestrial	None
Australian Marine Parks	None
<b>Other</b>	
State and Territory Reserves	1 – Whitsunday Islands
Regional Forest Agreements	None
Invasive Species	5
Nationally Important Wetlands	1 – Great Barrier Reef Marine Park
Key Ecological Features (Marine)	None

### 4.3.2 Fauna

#### Wildlife Online

A search was completed of the Queensland Government *Wildlife Online* database for the study area and a buffer zone. A central point was defined in the middle of the study area, and a 10 km buffer was searched.

The Wildlife Online search identified the following 10 threatened fauna species known to occur within the study area. A copy of the search results is enclosed in Appendix E and summarised in Table 5.

**Table 5 Wildlife Online threatened species search results**

Scientific name	Common name	NC Act status	EPBC Act status
<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	Vulnerable	Vulnerable
<i>Numenius madagascariensis</i>	Eastern curlew	Endangered	Critically endangered
<i>Esacus magnirostris</i>	Beach stone-curlew	Vulnerable	Marine
<i>Hemirhamphys fluviatorum</i>	Estuary stingray	Near threatened	Not Listed

Scientific name	Common name	NC Act status	EPBC Act status
<i>Megaptera novaeangliae</i>	Humpback whale	Vulnerable	Vulnerable
<i>Sousa sahalensis</i>	Australian humpback dolphin	Vulnerable	Migratory
<i>Dugong dugon</i>	Dugong	Vulnerable	Migratory/Marine
<i>Chelonia mydas</i>	Green turtle	Vulnerable	Vulnerable
<i>Crocodylus porosus</i>	Estuarine crocodile	Vulnerable	Migratory/Marine
<i>Acanthophis antarcticus</i>	Common death adder	Vulnerable	Not Listed

The Wildlife Online search indicated 11 introduced flora species and four introduced fauna species occurring within the study area.

### 4.3.3 Flora

#### Regulated Vegetation mapping

A search was completed of the Regulated Vegetation Management Mapping for the study area, Whitsunday Island, based on Lot 428 Plan NPW621. A copy of the search results is enclosed in Appendix E.

The mapping identifies:

- Category B - Remnant vegetation - least concern regional ecosystems

Essential habitat is mapped at Gulnare Inlet for the following fauna species:

- *Crocodylus porosus* Estuarine crocodile – listed as 'vulnerable' under the NC Act.

#### Regional Ecosystems mapping

A search was completed of the Regional Ecosystems Mapping for the study area based on Lot 428 Plan NPW621. A copy of the search results is enclosed in Appendix E and summarised in Table 6.

**Table 6 Summary of mapped Regional Ecosystem (RE) on Whitsunday Island**

Regional ecosystem (RE)	Percentage of RE (%)	Biodiversity status	Vegetation Management Act class
8.1.1	100	Endangered	Least concern
8.1.1/8.1.2	80/20	No concern at present/Of concern	Least concern/Least concern
8.1.2/8.1.1/8.1.3	60/35/5	Of concern/No concern at present/Of concern	Least concern/Least concern/Of concern
8.1.2/8.1.3	95/5	Of concern	Least concern/Of concern
8.12.11	100	No concern at present	Least concern
8.12.11/8.12.14	70/30	No concern at present	Least concern/Least concern
8.12.11/8.12.18	80/20	No concern at present	Least concern/Least concern
8.12.12	100	No concern at present	Least concern
8.12.13	100	Of concern	Of concern
8.12.13/8.12.14	85/15	Of concern/No concern at present	Of concern/Least Concern
8.12.13/8.12.14/8.2.1	50/40/10	Of concern/No concern at present/Of concern	Of concern/Least concern/Of concern

Regional ecosystem (RE)	Percentage of RE (%)	Biodiversity status	Vegetation Management Act class
8.12.14	100	No concern at present	Least concern
8.12.18	100	No concern at present	Least concern
8.12.26/8.12.11	70/30	Endangered/No concern at present	Of concern/Least Concern
8.12.29	100	Of concern	Of concern
8.2.1/8.2.8	70/30	Of concern/No concern at present	Of concern/Least Concern
8.2.7	100	Endangered	Least concern/Least concern/Of concern
8.2.8	100	No concern at present	Least concern
8.2.8/8.2.1	85/15	No concern at present/Of concern	Least concern/Of concern

#### 4.3.4 Broad vegetation groups

A search was completed of the Broad Vegetation Group Mapping for the study area based on Lot 428 Plan NPW621. A copy of the search results is enclosed in Appendix E and summarised in Table 7.

**Table 7 Summary of Mapped Broad Vegetation Groups**

Dominant broad vegetation group 1:5 million		Dominant broad vegetation group 1:2 million	
1	Rainforests and scrubland	5	Notophyll to microphyll vine forests, frequently with <i>Araucaria</i> spp. or <i>Agathis</i> spp. (kauri pines)
3	Eucalypt woodlands to open forest	9	Moist to dry eucalypt open forests to woodlands usually on coastal lowlands and ranges
8	Melaleuca open woodlands on depositional plains	22	Melaleuca spp. on seasonally inundated open forests and woodlands of lowland coastal swamps and fringing lines. (palustrine wetlands)
12	Other coastal communities or heaths	28	Open forests to open woodlands in coastal locations. Dominant species such as <i>Casuarina</i> spp., <i>Corymbia</i> spp., <i>Allocasuarina</i> spp. (she-oak), <i>Acacia</i> spp., <i>Lophostemon suaveolens</i> (swamp box), <i>Asteromyrtus</i> spp., <i>Neofabricia myrtifolia</i>
13	Tussock grasslands, forblands	32	Closed tussock grasslands in coastal locations
16	Mangroves and saltmarshes	35	Mangroves and saltmarshes

#### Protected plants flora survey trigger mapping

A search was completed of the Protected Plants Flora Survey Trigger Map for the study area (enclosed in Appendix E). The search identified three high risk areas on Whitsunday Island – centred around Cairn Beach, on the north-west side and at Whitsunday Peak.

#### 4.3.5 Geology

##### Surface geology

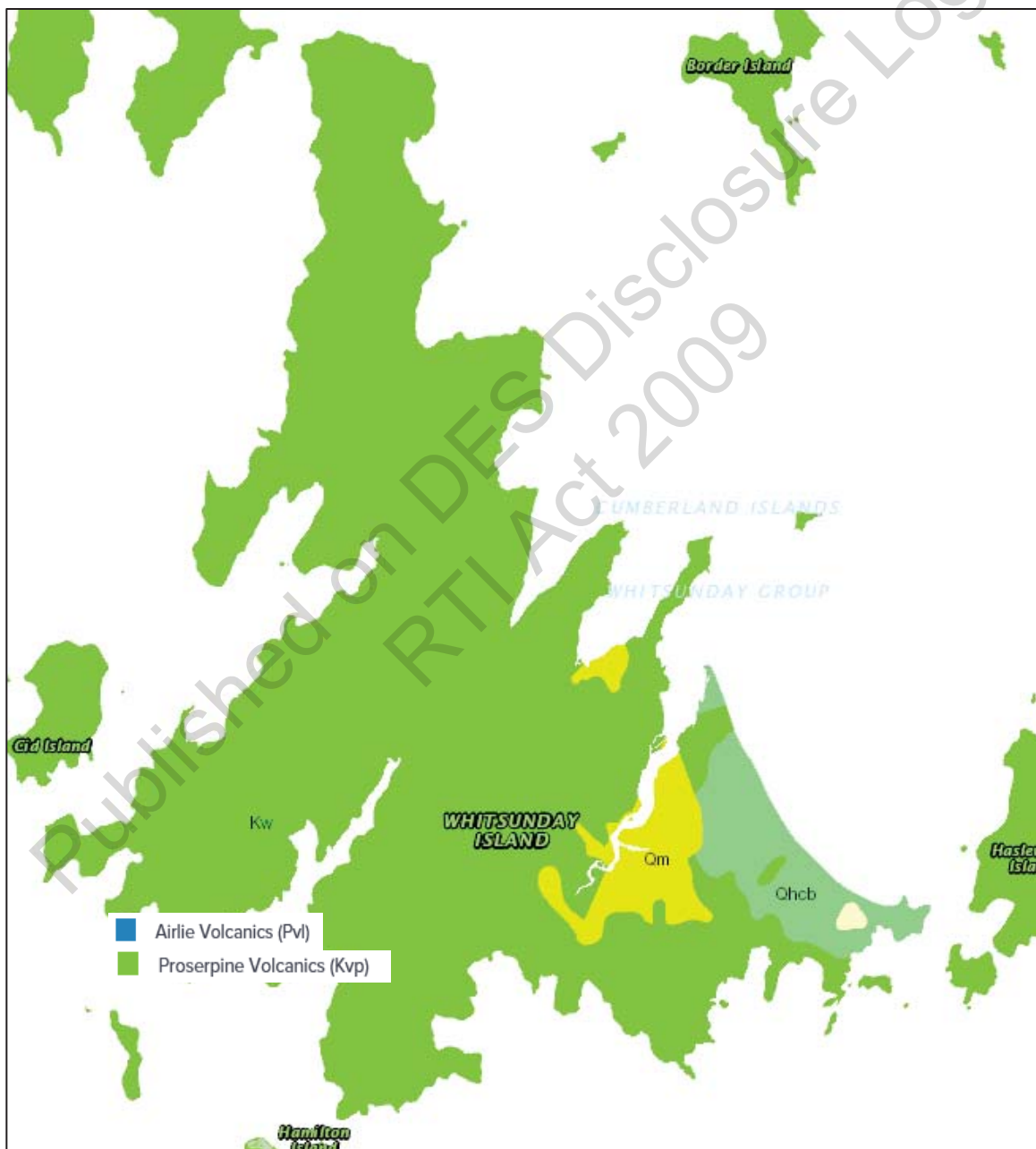
A review of the detailed surface geology mapping shows that Whitsunday Island primarily composes of Whitsunday Volcanics (refer to Figure 5 below for an extract from the mapping). The descriptions for these units are provided in

Table 8 below.

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**Table 8 Geological unit and descriptions**

Rock Unit Name	Dominant rock	Lithology summary
Whitsunday Volcanics (Kw)	Mixed volcanic and sedimentary rocks	Rhyolitic to andesitic volcanoclastic rocks, including ignimbrite, minor flows, conglomerate and sandstone
Qm-Qld	Miscellaneous unconsolidated sediments	Sand and mud; coastal marine deposits (salt pans, mangrove swamps, lagoonal deposits)
Qhcb-Qld	Sand	Moderately well-sorted, fine to coarse-grained quartzose to shelly sand and some gravel: beach ridges and cheniers



**Figure 5 Extract from detailed surface geology mapping (Source: Qld Globe 2018)**

## Soils

Whitsunday Island is mapped as ME2 under the Atlas of Australian Soils. Table 9 below provides a detailed description of the mapping.

**Table 9 Soil descriptions of the study area**

Mapping Unit	Description	General Description	Subsoil	Major Characteristics of Dominant Soil
ME2	High hilly or hilly lands with some strongly undulating marginal areas	Gn3.24 Brown smooth-ped earths	Gn3.14, Gn3.21, Gn3.11, Gn3.91, Gn3.94, Dy3.41, Dy3.42, Dr2.21, Um1.43, Um2.12	Gradational brown, A2 horizon non-bleached, acid smooth-ped whole col B horizon

## Topography

The elevation of Whitsunday Island ranges from sea level to 420 m AHD at Whitsunday Peak.

Whitsunday Island is characterised by the hilly topography. The higher parts of the island are concentrated on the western and northern sections around Whitsunday Cairn and Whitsunday Peak with lower landscape to the east at Whitehaven Beach.

### 4.3.6 Consultation – environment

#### General

As part of the high-level desktop assessment, information was sought from QPWS Whitsunday Regional staff to gain an appreciation of park management activities, sensitive ecological areas and cultural heritage management of Whitsunday Island.

Other subject matter experts were consulted to assess the likelihood of occurrence of particular threatened species, which have not yet been recorded on Whitsunday Island, but which are considered to have a reasonable potential to occur on the island. This includes consultation via email or phone with:

- [sch4p4( 6) Pers] Queensland University of Technology regarding threatened bat species, and in particular, the ghost bat *Macroderma gigas*
- Maree Cali, Queensland Department of Natural Resources, Mines and Energy regarding threatened bat species, and in particular the ghost bat and coastal sheathtail bat *Taphozous australis*
- [sch4p4( 6) Pe] WildMob, regarding water mouse *Xeromys myoides*
- Barry Nolan, Queensland Department of Environment and Science, regarding koala *Phascolarctos cinereus*
- Queensland Wader Study Group, regarding migratory shorebirds
- Society for Growing Australian Plants (SGAP), Mackay Branch, regarding lesser swamp orchid *Phaius australis* and other threatened flora species.

A general synopsis, arising from consultation and desktop research, regarding the likelihood of threatened, cryptic or unique flora and fauna on Whitsunday Island is presented in the following sections for target taxa.

General comments include:

- The paucity of records of threatened species is most likely due to limited survey effort rather than genuine absence
- The Whitsunday Islands are likely to contain a greater level of endemism of flora and fauna than is currently known, due to their isolation and lack of previous survey effort.



## Threatened fauna

### Water mouse *Xeromys myoides*

The water mouse is listed as 'vulnerable' under the EEPBC Act and 'vulnerable' under the NC Act. It has not been confirmed on Whitsunday Island to date, but likely habitat for this species on the island includes landward mangroves dominated by taller forest of *Ceriops tagal* +/- *Bruguiera* spp, particularly the supra-littoral margins in Cid Harbour and Gulnare Inlet. Adopting a precautionary approach in the high-level assessment, all mangrove and marine plant Regional Ecosystems (RE) on the island have been identified as suitable habitat for water mouse.

### Dugong *Dugong dugon*

The dugong is listed as 'migratory' and 'marine' under the EPBC Act and 'vulnerable' under the NC Act, and known to occur in the waters around Whitsunday Island. Tongue Bay contains important areas of seagrass habitat for dugong and marine turtles (DNPRSR, 2013). Annual monitoring of seagrass communities in Tongue Bay occurs through the Marine Monitoring Program (MMP), which was established in 2005. The MMP is undertaken in the Great Barrier Reef (the Reef) lagoon and assesses the long-term effectiveness of the Australian and Queensland Government's Reef Water Quality Protection Plan (Reef Plan).

### Koala *Phascolarctos cinereus*

Anecdotal reports of the koala, which is listed as 'vulnerable' under the EPBC Act and NC Act, have been recorded from Whitsunday Island, although no confirmed records exist. Tracks on the northern end of Whitehaven Beach which were reportedly seen during clean-up operations following Cyclone Debbie were identified as koala. Historical anecdotal reports of koala in woodland in the vicinity of Gulnare Inlet we also collected (Darren Larcombe, *pers. comm.*). The koala has been introduced to other islands in along the Queensland coast (for example, St Bees Island, Magnetic Island), so it is plausible that they may have been introduced to Whitsunday Island, although the circumstances are unknown. Adopting a precautionary approach in the high-level assessment, all suitably mapped eucalypt RE on the island have been identified as potential habitat for koala and would need to be investigated in more detail when development options are considered.

### Saltwater crocodile *Crocodylus porosus*

The saltwater crocodile is listed as 'migratory' and 'marine' under the EPBC Act and 'vulnerable' under the NC Act. Occasional sightings of this species are recorded from Gulnare Inlet, although no breeding sites have been identified (Alex Hoffmann, *pers. comm.*) Other estuarine environments that could provide preferred habitat for the saltwater crocodile include Hill Inlet. Adopting a precautionary approach in the high-level assessment, both Gulnare and Hill Inlet have been identified as potential habitat for saltwater crocodile and would need to be investigated in more detail when development options are considered.

### Ghost bat *Macroderma gigas*

The ghost bat (*Macroderma gigas*) is listed as 'vulnerable' under the EPBC Act and 'endangered' under the NC Act, and is known to roost in large sandstone and limestone caves. There has been speculation for many decades that ghost bats might occur on Whitsunday Island but to date there is no evidence to support the theory. Sightings have occurred on the adjacent mainland (Roger Coles, Maree Cali *pers. comm.*) and there is some doubt that they would fly over so much open water to maintain a population on Whitsunday Island. Other bat species are known to do this (Roger Coles, *pers. comm.*). Adopting a precautionary approach in the high-level assessment, significant areas of rocky outcrops and caves on the island, identified from aerial imagery and consultation with QPWS, have been identified as potential habitat for ghost bat.

### Coastal sheathtail bat *Taphozous australis*

The coastal sheathtail bat is not a listed threatened species under the EPBC Act and listed as 'near threatened' under the NC Act. Whilst no specific surveys for the coastal sheathtail bat have occurred on Whitsunday Island, they would almost certainly roost in the sea caves and rocky outcrops on the island (Roger Coles, Maree Cali, *pers. comm.*). This species is known to roost in sea caves within 50 m of the Highest Astronomical Tide (HAT) (DSITIA, 2012). Adopting a precautionary approach in the high-level assessment, significant areas of rocky outcrops and sea caves on the island within 50 m of HAT, identified from aerial imagery, have been identified as potential habitat for coastal sheathtail bat.

### **Bare-rumped sheathtail bat *Saccolaimus nudicluniatis***

The bare-rumped sheathtail bat is listed as 'vulnerable' under the EPBC Act and 'endangered' under the NC Act. This species has been recorded as far south as Bowen and is considered a possibility to occur on Whitsunday Island (Roger Coles, *pers. comm.*). In Australia, the bare-rumped sheathtail bat has been recorded mostly in eucalypt forests and woodlands, generally in near-coastal areas. In Queensland, it is known to be associated with coastal lowland rainforests, and more open forests dominated by Eucalyptus or Corymbia species interspersed with coastal lowland rainforest (TSSC, 2016). As this habitat is widespread across Whitsunday Island, it has not been specifically mapped as potential habitat for the bare-rumped sheathtail bat and will need to be assessed in more detail when development options are considered.

### **Osprey *Pandion haliaetus***

The osprey is listed as a 'migratory wetland' species under the EPBC Act and 'special least concern' under the NC Act, and is known to occur on Whitsunday Island, with 45 records in the WildNet database. No known nest sites on Whitsunday Island were identified during consultation.

### **Beach stone curlew *Esacus magnirostris***

The beach stone curlew, which is listed as 'marine' under the EPBC Act and 'vulnerable' under the NC Act, is known to occur on Whitsunday Island, with 13 records in the WildNet database. A number of individuals of this species has been observed in the foredunes in the bay to the west of Chance Bay (Alex Hoffmann, *pers. comm.*). The bay is a sensitive ecological area for several reasons (for example, intertidal seagrass beds, sensitive riparian and dune habitat).

### **Migratory shorebirds (waders)**

The estuarine wetland of Hill Inlet on Whitsunday Island provides habitat for migratory shorebirds and is identified as one of the draft key values of Whitsunday Islands National Park (DES, 2018).

### **Marine turtles**

The waters around Whitsunday Island provide important foraging habitat for marine turtles, however, no turtle nesting sites are known from Whitsunday Island (Darren Larcombe, Alex Hoffmann, *pers. comm.*)

### **Threatened flora**

No threatened flora species have been recorded from Whitsunday Island. However, anecdotal reports of lesser swamp orchid *Phaius australis* on the island were obtained from the Society for Growing Australian Plants (SGAP), Mackay branch. This species, which is listed as 'endangered' under the EPBC Act and NC Act is associated with coastal wet heath/sedgeland wetlands, swampy grassland or swampy forest and often where broad-leaved paperbark *Melaleuca leucadendra* or swamp mahogany *Eucalyptus robusta* are found. Less commonly, the species has been found in drier forest near the coast (TSSC, 2014).

Swamp orchids of unknown species have been observed recently on Whitsunday Island (Alex Hoffmann, *pers. comm.*). Adopting a precautionary approach in the high-level assessment, the historical anecdotal records locations have been identified as potential habitat for the lesser swamp orchid. Areas of suitable habitat for this species would need to be investigated in more detail when development options are considered.

## **4.3.7 Marine Park**

### **Great Barrier Reef Marine Park - Commonwealth marine park**

The Great Barrier Reef Marine Park (GBRMP), established under the *Great Barrier Reef Marine Park Act 1975* (Cth) excludes Queensland Government owned islands, including Whitsunday Island.

The surrounding waters up to the low water mark is within the GBRMP.

#### **Zoning**

Table 10 and Figure 6 summarises the zoning applicable to Whitsunday Island surrounding waters.

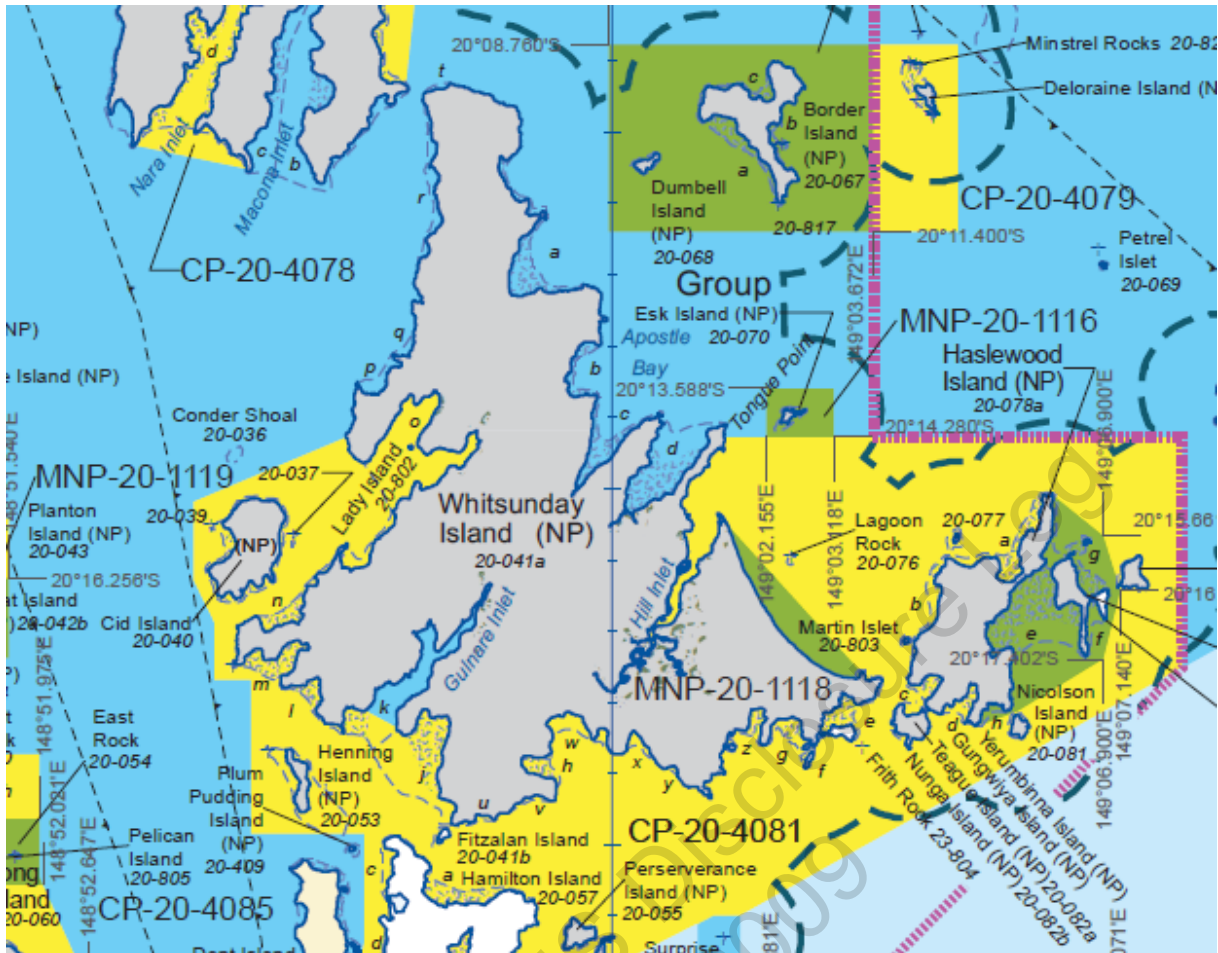


Figure 6 Extract from Great Barrier Reef Marine Parks Zoning – Map 10 Whitsunday Islands

Table 10 Great Barrier Reef Marine Parks zoning

Zone	Description
Habitat Protection	Provides for the conservation by protecting and managing sensitive habitats and ensuring they are generally free from potentially damaging activities.
Conservation Park	Allows for increased protection and conservation of areas of the Marine Park, while providing opportunities for reasonable use and enjoyment including limited extractive use. Most extractive activities are allowed with additional restrictions for most fishing activities.
Marine National Park	'No-take' area and extractive activities like fishing or collecting are not allowed without a permit. Anyone (with the exception of unattached dory) can enter and participate in activities such as boating, swimming, snorkelling and sailing.

### Special management areas

*Whitsundays Public Appreciation Special Management Area* applies to that area that is in the Conservation Park Zone. These areas must not be used or entered for any of the following purposes:

- Limited spearfishing
- The conduct of a harvest fishery; or
- Aquaculture operations.

### Great Barrier Reef Coast Marine Park - State marine park

The Great Barrier Reef Coast Marine Park (GBR Coast MP) is established under the *Marine Parks Act 2004 (Qld)*. The park boundary extends to the highest astronomical tide on Whitsunday Island therefore fills the intertidal gap between the GBRMP (Commonwealth).

The GBR Coast MP zoning is the same as the GBRMP zoning.

## 4.3.8 Hazards

### Bushfire prone areas

A search conducted on mapping Whitsunday Regional Council indicated that sections of the study area are prone to medium, high and very high bushfire hazards.

A copy of the mapping is included in Appendix E.

### Coastal hazards

A search was completed for State Planning Policy coastal hazard mapping of the study area by Lot 428 Plan NPW621, which indicated that the following were present:

- Erosion Prone Area
  - Erosion due to storm impact and long-term trends including sediment supply deficit and channel migration; and
  - Erosion from permanent tidal inundation due to sea level rise.
- Storm Tide Inundation Area
  - High hazard area (greater than 1 m water depth).

### Historic shipwrecks

A search of the Australian National Shipwreck Database of the study area was completed. There are five shipwrecks within 2km of Whitsunday Island.

**Table 11 Australian National Shipwreck Database results**

Vessel Name	Vessel Type	Year Wrecked
Island Gypsy	Unknown	1970
Baratta	Single screw steamer	1903
Midget Sub	Submarine	Unknown
Dudley	Sailing vessel	1899
Mascot	Unknown	1904

## 4.4 Environmental constraints analysis

### 4.4.1 Mapped constraints

Potential environmental and cultural heritage constraints that could guide the location and type of ecotourism products on Whitsunday Island were identified based on consultation with QPWS officers, subject matter experts and desktop searches.

The following categories were identified

- High – known constraints exist
- Medium – potential constraints exist
- Low – no specific known constraints exist.

The following constraints were identified.

**Table 12 Environmental constraints**

Rating	Constraint
High	REs identified as sensitive areas as per WPOM: <ul style="list-style-type: none"> <li>■ 8.2.2</li> <li>■ 8.2.7e</li> <li>■ 8.2.9</li> </ul>
High	Mapped of Concern Regional Ecosystems
High	Tongue Bay as identified by QPWS staff as dugong habitat
High	Bay west of Chance Bay as identified by QPWS staff as sensitive ecological area
High	Hill Inlet identified as migratory shorebird habitat
Medium	Anecdotal Swamp Orchid records
Medium	Gulnare Inlet and Hill Inlet identified as saltwater crocodile habitat
Medium	REs identified as suitable habitat for water mouse <i>Xeromys myoides</i> : <ul style="list-style-type: none"> <li>■ 8.1.1</li> <li>■ 8.1.1/8.1.2</li> <li>■ 8.1.2/8.1.1/8.1.3</li> <li>■ 8.1.2/8.1.3</li> </ul>
Medium	Suitable habitat for coastal sheathtail bat <i>Taphozous australis</i> : <ul style="list-style-type: none"> <li>■ all areas of coastline with rocky areas within 50 m of HAT</li> </ul>
Medium	REs identified as suitable habitat for koala <i>Phascolarctos cinereus</i> : <ul style="list-style-type: none"> <li>■ 8.12.14a</li> <li>■ 8.12.14b</li> <li>■ 8.12.14b/8.12.14a</li> <li>■ 8.12.29b</li> <li>■ 8.2.8b</li> <li>■ 8.2.8b/8.2.1</li> </ul>
Medium	Identified potential habitat for ghost bat - caves particularly at the northern end of Whitsunday Island with an easterly aspect and eastern side of Hill Inlet

Known and potential environmental constraints have been represented spatially as a 'Heat Map', which is presented in Appendix F.

## 5 Cultural heritage overview

### 5.1 Introduction and purpose

To inform the feasibility study for premium ecotourism products on Whitsunday Island, a desktop review was completed to identify expected cultural heritage constraints. This report includes the following:

- A desktop review including a search of the Queensland Heritage Register, the Local Heritage Register for Whitsunday Regional Council and Aboriginal and Torres Strait Islander Cultural Heritage Database and Register
- A desktop review of relevant spatial information
- A 'heat map' of the identified environment and heritage constraints.

A copy of all references for this chapter are contained within Appendix C.

### 5.2 Cultural heritage values

The greater Whitsunday region holds cultural heritage values for the Traditional Owners — the Gia, Juru and Ngaro people. The values are inherited from past generations and are maintained today, continuing the ancient responsibility to manage land and sea areas for future generations.

Being sea country specialists, the Traditional Owners historically used the rich marine resources of the intertidal zones, fringing reefs and surrounding seas to operate a marine economy and support their community. As skilled navigators, they travelled from island to island in outriggers and canoes.

Rock shelters, middens, art sites, quarries, stone fish traps and sites of spiritual importance remain as evidence of historical occupation throughout the wider Whitsunday area. Known sites are found on Whitsunday, Hook, Border, Cid, Hayman (not National Park), Lindeman, Little Lindeman, Long, Saddleback and South Molle Islands. Many other sites not yet recorded are thought to exist.<sup>7</sup>

### 5.3 Desktop assessment of existing cultural heritage environment

#### 5.3.1 World Heritage listing

The Great Barrier Reef is recognised internationally as a World Heritage Area under the World Heritage Convention.

Specific to Whitsunday Island, under Criterion (vii) (to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance), the listing states:

*The Whitsunday Islands provide a magnificent vista of green vegetated islands and spectacular sandy beaches spread over azure waters.*

#### 5.3.2 Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) Cultural Heritage Database and Register

A search of the DATSIP Cultural Heritage Database and Register was undertaken and a copy of the search results is included in Appendix E and summarised in Table 13.

<sup>7</sup> Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013; Whitsunday Islands Fire Strategy 2009

**Table 13 DATSIP Cultural Heritage search results**

Item	Records within study area
Cultural heritage site points	14
Aboriginal cultural heritage site polygons	None recorded
Cultural heritage party	None recorded
Cultural heritage body	None recorded
Cultural heritage management plans	None recorded
Designated Landscape Areas (DLA)	None recorded
Registered Study Cultural Heritage Areas	None recorded

### 5.3.3 Local and state heritage places

The Queensland Heritage Register contains places within Queensland that have cultural heritage significance to the people of Queensland. These places are either a State Heritage Place, which contribute to the understanding of the wider pattern and evolution of Queensland's history and heritage; or a Protected Area, which has strong heritage values that are vulnerable and under threat.<sup>8</sup>

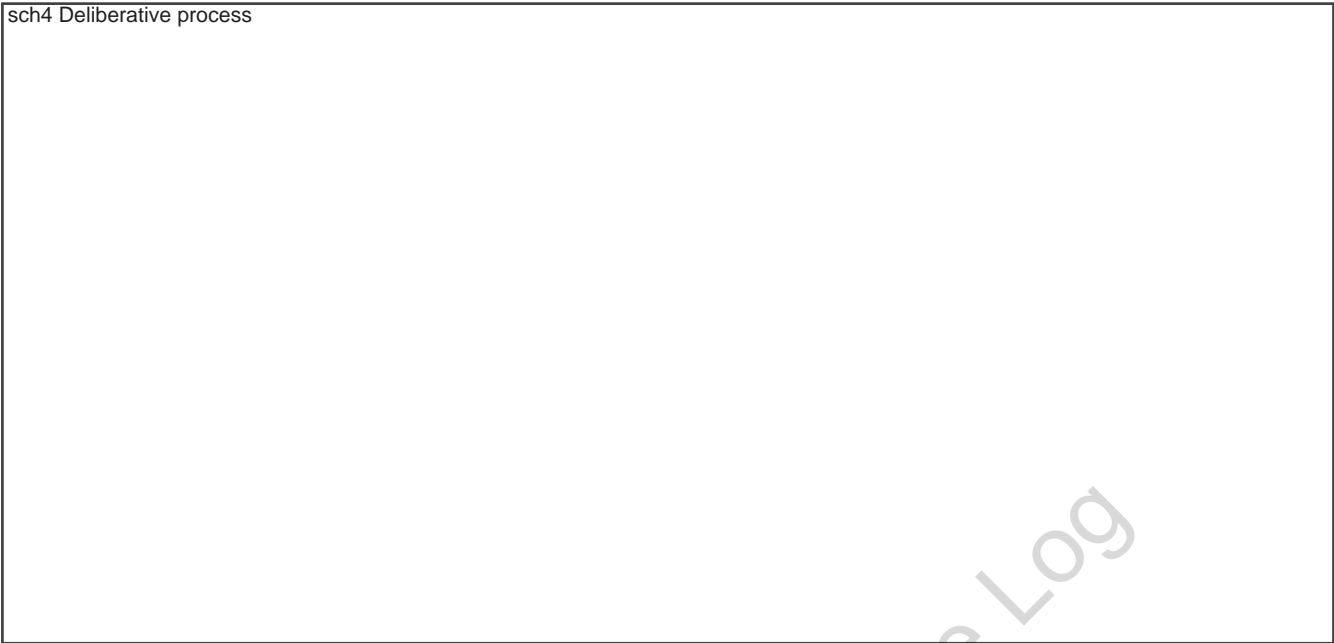
The Local Heritage Register for the Whitsunday Regional Council was adopted in accordance with the requirements of the *Queensland Heritage Act 1992*. The places included in this register reflect the important historical themes of the Whitsunday region, including sugar, mining, settlement and tourism.

A search of the Queensland Heritage Register and the Local Heritage Register of the study area was undertaken. There are no recorded State or local heritage places on Whitsunday Island.

## 5.4 Cultural heritage consultation

sch4 Deliberative process

<sup>8</sup> <https://www.qld.gov.au/environment/land/heritage/register/search>



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## 6 Legislative overview

### 6.1 Introduction and purpose

In order to inform the understanding of the various regulatory regimes governing the commercial, environmental and heritage issues that may arise throughout the project, a review of those regimes was undertaken, and they are summarised below. The report includes:

- A full list of all relevant legislation
- The agencies responsible for the monitoring and enforcement of the legislation
- Risks and actions which may potentially trigger the legislation
- Necessary approvals and regulatory processes created by the legislative instruments.

### 6.2 Legislation and policy review

#### 6.2.1 Australian Government legislation

##### Overview

Table 15 below summarises the potential Commonwealth legislative triggers for ecotourism development on Whitsunday Island.

**Table 15 Commonwealth legislative considerations summary**

Legislation	Responsible agency	Potential triggers	Potential approvals
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Commonwealth Department of Environment and Energy	Development which may impact on Matters of National Environmental Significance (i.e. EPBC listed flora and fauna, GBR World Heritage Area)	EPBC Self-Assessment or Referral
<i>Great Barrier Reef Marine Park Act 1975</i>	Great Barrier Reef Marine Park Authority	Activity within the GBR Marine Park (not including land above Mean Low Water Mark)	Marine Parks Permit
<i>Historic Shipwrecks Act 1976</i>	Commonwealth Department of Environment and Energy	Any recreational, research or commercial activity that has the potential to damage or interfere with an historic shipwreck or relic requires a permit.	Permit application for entry into a protected zone or disturbance of historic shipwreck or relic
<i>Native Title Act 1993</i>	Attorney-General's Department supported by National Native Title Tribunal	Native title claims and Indigenous Land Use Agreements (ILUA)	Dependent on presence of triggers
<i>Native Title (Queensland) Act 1993</i>	Queensland Department of Aboriginal and Torres Strait Islander Partnerships	Enabling legislation for Queensland. Refer to Commonwealth legislation trigger points	As above

## ***Environment Protection and Biodiversity Conservation Act 1999***

Under the EPBC Act, an action requires approval from the federal environment Minister if the action has, will have, or is likely to have, a significant impact on a Matter of National Environmental Significance (MNES). The MNES impact guidelines (1.1 and 1.2) provide 'self-assessment' criteria to assist in determining if a referral is required.

The study area contains multiple MNES including potential habitat for endangered, vulnerable or near-threatened (EVNT) species, and a World Heritage Area. An EPBC self-assessment should be completed to determine if impacts are likely to be significant. This is recommended once a more advanced understanding of the potential development actions within the study area are known.

## ***Great Barrier Reef Marine Park Act 1975***

The legislative and planning framework protecting the Great Barrier Reef is the *Great Barrier Reef Marine Park Act 1975* (the GBRMP Act).

### **Marine Parks Permit**

The Great Barrier Reef Marine Park Authority (GBRMPA) and QPWS implement a joint permission system.

An activity (or part of the activity) that will take place within the Australian or Queensland Marine Parks or will require use of the Marine Parks will require a Marine Parks Permit. The land above Mean Low Water Mark is exempt.

### **Whitsunday Plan of Management 1998**

The GBRMPA has prepared the WPOM to protect and conserve the values of the Whitsunday Planning Area while allowing for a range of experiences and reasonable opportunities for access and use.

The WPOM sets out five settings categories with vessel and aircraft access restrictions.

There are three designated anchorage sites and four superyacht anchorage sites around Whitsunday Island.

#### **Tongue Bay, Hill Inlet and Whitehaven Beach**

Hill Inlet including the northern end of Whitehaven Beach is included in Setting 5 – protected area.

GBRMPA will not grant any new permissions for tourism operations to access a Setting 5 area except for cultural tours operated by a Traditional Owner group.

### ***Historic Shipwrecks Act 1976***

Development within the vicinity of a historic shipwreck must be in accordance with the requirement of the *Historic Shipwrecks Act 1976* (Cth). A permit is required from the Australian Government Department of the Environment and Energy for any activities with the potential to damage or interfere with a shipwreck which is more than 75 years old.

### ***Native Title Act 1993***

Native Title rights and interests may exist over national parks and need to be considered under the Act with regards to future acts. It is a requirement of the Act to consult with Native Title parties if a future act is likely to affect Native Title rights. The establishment and operation of an ecotourism facility may trigger the process under the Act if a change of tenure is proposed. An indigenous land use agreement (ILUA) may be required to define the management intent and procedures associated with an ecotourism activity.

Ecotourism facility proponents will be required to determine the Native Title status of a site or an area proposed for an ecotourism facility and to undertake the required consultation and negotiations if the proposal triggers the future act procedures.

## **6.2.2 Queensland legislation**

### **Overview**

Table 16 below summarises the potential Queensland legislative triggers for ecotourism development on Whitsunday Island.

**Table 16 Queensland legislative considerations summary**

Legislation	Responsible Agency	Potential Trigger	Potential Approvals
<i>Aboriginal Cultural Heritage Act 2003</i>	Department of Aboriginal and Torres Strait Islander Partnerships	High risk cultural heritage landscape, known cultural heritage artefacts and values within and adjacent to development footprint	Duty of care through consultation with Aboriginal Party prior to development
<i>Biosecurity Act 2014</i>	Department of Agriculture and Fisheries	Category 1 or 2 restricted matters	Notification to DAF
<i>Building Act 1975</i>	Private building certifier	New building works other than accepted building works	Building Permit
<i>Coastal Protection and Management Act 1995</i>	Department of Environment and Science	Operational works that are: <ul style="list-style-type: none"> <li>■ tidal works, or</li> <li>■ work carried out completely or partly in a coastal management district that involves interfering with quarry material on Queensland coastal land above high-water mark</li> </ul>	Development Permit for Operational Works <i>If not excluded works and accepted development</i>
<i>Environmental Offsets Act 2014</i>	Department of Environment and Science	Prescribed environmental activity or matters	Environmental offset condition <i>If matters subject to a Development Approval process, offsets will be required if there will be a significant residual impact to the relevant environmental matter.</i>
<i>Environmental Protection Act 1994</i>	Department of Environment and Science	High impact earthworks within a Wetland Protection Area or Trigger Area	Development Permit
<i>Fisheries Act 1994</i>	Department of Agriculture and Fisheries	Development within Fish Habitat Areas	<i>Not applicable for Whitsunday Island</i>  Declared Fish Habitat Areas are areas that are declared under the Fisheries legislation and are mapped.  A search of the mapping (via Qld Globe) found that there are no Declared Fish Habitat Areas mapped around Whitsunday Island
		Marine plant removal	Development Permit for Operational Works <i>If not excluded works and accepted development</i>
		Construction of barriers within watercourses	<i>Not applicable for Whitsunday Island</i>
<i>Marine Parks Act 2004</i>	Department of Environment	Development below the low water mark	Marine Parks Permit
<i>Nature Conservation Act 1992</i>	Department of Environment and Science	Building infrastructure and structure in a protected area for a fixed term	Authorisations for infrastructure and structures in protected areas (section 34)
		Clearing protected plants	<i>Not applicable for Whitsunday Island</i>
		Interfering with an animal breeding place	<i>Not applicable for Whitsunday Island</i>

Legislation	Responsible Agency	Potential Trigger	Potential Approvals
<i>Planning Act 2016</i>	Whitsunday Regional Council State Assessment and Referral Agency	Establishing a new use (a material change of use)	Development Permit
<i>Queensland Heritage Act 1992</i>	Department of Environment and Science	Development on a State Heritage Place	<i>Not applicable for Whitsunday Island</i>
<i>Vegetation Management Act 1999</i>	Department of Natural Resources, Mines and Energy	Clearing remnant vegetation	<i>Not applicable for Whitsunday Island</i>

### **Aboriginal Cultural Heritage Act 2003**

The *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act) is intended to “provide effective recognition, protection and conservation of Aboriginal cultural heritage.” (Section 4, p.10). Establishing “a duty of care for activities that may harm Aboriginal cultural heritage” (Section 6(d), p.11) is one mechanism employed by the ACH Act to achieve this purpose.

Section 23(1) of the ACH Act states that a person who carries out an activity must take all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage. The proponent of any potential ecotourism activity will need to follow the Duty of Care Guidelines to demonstrate that all practical and reasonable measures have been taken to satisfy the duty of care responsibility under the ACH Act.

Along with the appropriate level of consultation for the proposed activity, this may involve a Cultural Heritage Assessment and/or the preparation of Cultural Heritage Agreement to document the agreed manner to manage and protect cultural heritage in and around the trail location. This will need to be undertaken in conjunction with the Aboriginal Parties identified for the site and/or with their nominated representative(s) e.g. anthropologist, archaeologist or lawyer.

### **Biosecurity Act 2014**

The *Biosecurity Act 2014* (Biosecurity Act) provides for a comprehensive biosecurity framework to manage the impacts of animal and plant diseases and pests.

The Biosecurity Act identifies ‘restricted matters’ and these include biosecurity matters which are present and if are not subject to restrictions under the Act to reduce, control or contain it, may have an adverse effect. Some non-native flora species are identified as ‘restricted matters’ under the Act and are assigned a category number. Obligations on land owners (including QPWS) is dependent on the category of the restricted matter.

Presence of restricted matters within the potential development footprint will need to be determined during ground truthing. If Category 1 or Category 2 restricted matter is observed, notification to the Department of Agriculture and Fisheries (DAF) is required.

It is noted that QPWS has developed a Pest Management System to facilitate pest management planning and to guide on-ground pest management activities.

### **Building Act 1975**

The *Building Act 1975* (Qld) regulates building development approvals, building work, building classification and building certifiers.

All new building works, apart from accepted and exempt building works, require a building permit. Building permits are generally issued by a private building certifier. Building certifiers are responsible for assessing the proposed building work against the relevant provisions of the *Building Act 1975* and associated standards.

### **Coastal Management and Protection Act 1995**

The *Coastal Management and Protection Act 1995* (CMP Act) aims to provide the protection, conservation, rehabilitation and management of the coastal zone, including its resources and biological diversity.

Whitsunday Island is within the coastal management district.

Generally, operational works that are tidal works, or work carried out completely or partly in a coastal management district that involves interfering with quarry material on Queensland coastal land above high-water mark are assessable developments requiring a development approval before the works can be undertaken.

Exemptions apply for excluded works and accepted development (as per the code for accepted development) for minor, lower impact development.

### ***Environmental Offsets Act 2014***

The *Environmental Offsets Act 2014* and the *Environmental Offsets Regulation 2014* coordinates the delivery of environmental offsets across jurisdictions and provides a single piece of legislation for offsets in Queensland. An environmental offset may be required if a proposed activity is likely to result in a significant residual impact on prescribed environmental matters.

Prescribed environmental matters applicable to Whitsunday Island include:

- Regulated vegetation
- Wetland in a wetland protection area
- Protected wildlife area
- Protected area
- Marine plants.

To determine offset requirements, the *Significant Residual Impact Guideline* (the Guideline) under the *Queensland Environmental Offsets Policy* outlines when an action is likely to have a significant residual impact to Matters of State Environmental Significance (MSES) and therefore when an offset will be required.

### ***Environmental Protection Act 1994***

The *Environmental Protection Act 1994* (EP Act) aims to protect Queensland's environment while allowing for development that improves the quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

#### **Wetland Protection Area**

Wetland protection areas are mapped on a map of referable wetlands under the *Environmental Protection Regulation 2008*. Whitsunday Islands include one mapped wetland protection area between Chance Bay and Whitehaven Beach.

The *Planning Regulations 2017* makes high impact earthworks assessable development. High impact earthworks are defined as operational works that divert water to or from a wetland by changing the form of the land or building a structure.

### ***Fisheries Act 1994***

The *Fisheries Act 1994* (Fisheries Act) provides for the management, use, development and protection of fisheries resources and fish habitats. Approvals are required for marine plant disturbance, works in a declared fish habitat or constructing or raising a waterway barrier.

#### **Marine plant disturbance**

Marine plants are considered to be a MSES. The study area contains significant areas of marine plants.

Depending on the categorisation of development and the total area of marine plant removal, an application will be required to obtain a development permit from DAF. As part of this process, environmental offsets may be required.

#### **Works in a declared fish habitat**

Declared Fish Habitat Areas protect the key fish habitats that are vital for local fish populations and the sustainability of fish stocks.

There are no declared Fish Habitat Areas surrounding Whitsunday Island.

## Constructing or raising a waterway barrier

Waterway barriers are structures which limit fish passage along a watercourse. Waterway barriers can be temporary or permanent and there are self-assessable codes which apply. To construct or raise waterway barrier works within a waterway, a development application under the Planning Act, or compliance with the Accepted Development Code, is needed.

The 'Queensland Waterways for Waterway Barrier Works' mapping defines the limits of waterways for the purpose of managing impacts to fish passage from waterway barriers. There are no defined waterways mapped on Whitsunday Island.

## Marine Parks Act 2004

The *Marine Parks Act 2004* establishes and conserves marine parks in Queensland.

The study area falls within the *Great Barrier Reef Coast Marine Park* and has boundaries to the following zones:

- Habitat protection zone
- Conservation park zone
- Marine national park zone.

If development is proposed within these areas, a permit may be required from DES.

## Nature Conservation Act 1992

National parks are protected areas under the *Nature Conservation Act 1992* (NC Act). The objective of the NC Act 'is the conservation of nature while allowing for the involvement of indigenous people in the management of protected areas in which they have an interest under Aboriginal tradition or Island custom'.

### Section 35 Authority

The NC Act provides for the development of privately owned, low impact, purpose-built ecotourism facilities on national parks.

Under section 35 of the NC Act, the Department may grant, make, issue or give a lease, agreement, licence, permit or other authority over, or in relation to, land in a national park for an ecotourism facility if-

- (i) the use will be in the public interest; and
- (ii) the use is ecologically sustainable; and
- (iii) the use will provide, to the greatest possible extent, for the preservation of the land's natural condition and the protection of the land's cultural resources and values;

For the purposes of the NC Act, ecotourism facilities must:

- Be designed and managed to facilitate the presentation, appreciation and conservation of the land's natural condition and cultural resources and values (the primary purpose)
- Be managed in a way that does not allow an activity to be carried out on the land that:
  - Is inconsistent with the primary purpose; or
  - Would require a significant change to the land's natural condition or would adversely affect the conservation of the land's cultural resources and values.

## Assessment process

DES has a dual approach for attracting investment for ecotourism facility opportunities:

- A government-led tender process where:
  - The Queensland Government identifies, assesses and prepares high quality sites with significant ecotourism potential in national parks
  - The Queensland Government undertakes due diligence and preliminary assessments of environmental, heritage, infrastructure development, provision of utilities and planning issues to remove uncertainty and to release sites that are investor-ready

- Sites released through a competitive EOI process aimed at attracting high quality innovative investors with the capability to realise the potential of the opportunity
- An investor-led process:
  - Investor responds to a Queensland Government invitation for 'general' expressions of interest for ecotourism facilities in national parks
  - Investor identifies a site and a concept for an ecotourism facility and makes a submission to the Queensland Government for the proposal; or
  - The investor undertakes all due diligence and is responsible for all assessments and gaining all required approvals.

In reference to the Queensland Ecotourism Development Toolkit (September 2016), the assessment is managed in a two-staged process:

- Stage 1 – Preliminary concept assessment
  - This stage is the competitive expressions of interest stage
  - The Stage 1 application is assessed by DES
  - Access consent may be granted (conditional) to enable initial on-site investigations and design
  - Owners consent granted to obtain other approvals
- Stage 2 – Full proposal assessment
  - This stage includes public consultation
  - Conditions precedent is issued
  - Upon satisfaction of conditions precedent, including all approvals, recommendation to Chief Executive of DES made to support regulation amendment.

### **Protected plants**

Chapter 4 of the *Nature Conservation (Wildlife Management) Regulation 2006* sets out the requirements for clearing protected plants.

A review of the Protected Plants Flora Survey Trigger Mapping identified that within the study areas are two 'high risk' areas. A flora survey of the clearing impact area must be undertaken prior to any potential clearing. If the flora survey identifies the presence of endangered, vulnerable or near-threatened (EVNT) plants in the clearing impact area, a clearing permit is required before any potential clearing.

As per section 4, the *Nature Conservation (Wildlife Management) Regulation 2006* is applicable only to wildlife that is not in a protected area.

### **Tampering with animal breeding places**

Section 332 of the *Nature Conservation (Wildlife Management) Regulation 2006* sets out the requirements for tampering with animal breeding places.

Where development is likely to impact any breeding places, a Species Management Program (SMP) will be required.

As per section 4, the *Nature Conservation (Wildlife Management) Regulation 2006* is applicable only to wildlife that is not in a protected area.

### **Planning Act 2016**

The *Planning Act 2016* (Qld) (Planning Act) provides the planning approvals framework for Queensland. The main types of development managed under the Planning Act are:

- Making a material change of use
- Carrying out operational work
- Reconfiguring a lot

- Carrying out building work
- Carrying out plumbing and drainage work.

### **Local planning scheme**

Whitsunday Island is within the Whitsunday Regional Council area and the applicable planning scheme is the *Whitsunday Regional Council Planning Scheme – July 2017*.

Whitsunday Island is zoned as 'environmental management and conservation'. A material change of use for a new use (including eco-accommodation) is likely to be assessable development and require a development permit.

### **State Referral**

The referral of a development application to the Queensland Government is triggered under Schedule 10 of the *Planning Regulation 2017* (Qld). The State Assessment and Referral Agency (SARA) assesses development applications against the State Development Assessment Provisions.

### **Queensland Heritage Act 1992**

The *Queensland Heritage Act 1992* (Qld) protects:

- Non-indigenous places of cultural heritage significance to Queensland that area entered in the Queensland Heritage Register
- Places of local heritage significance listed by local government in a local heritage register under the Act.

There are no State or local heritage places listed in Whitsunday Island.

### **Recreation Areas Management Act 2006**

The *Recreation Areas Management Act 2006* establishes seven recreational areas which are managed by QPWS. Whitsunday Island is not within a recreation area under this Act.

### **Transport Infrastructure Act 1994**

The purpose of the *Transport Infrastructure Act 1994* (TI Act) is to allow for the effective integrated planning and management of transport infrastructure. The TI Act covers Queensland Government controlled roads, rail, ports, airports, public marine transport, busways and light rail.

There is no transport infrastructure on Whitsunday Island. The public moorings are managed under the *Great Barrier Reef Marine Park Regulations 1983 (Cth)*.

### **Vegetation Management Act 1999**

The purpose of the *Vegetation Management Act 1999* (VM Act) is to regulate the clearing of vegetation in Queensland.

In accordance with section 7 of the VM Act, the VM Act does not apply to clearing of vegetation on National Park tenure.

### **Water Act 2000**

The Department of Natural Resources and Mines (DNRM) administers the *Water Act 2000* (Water Act). Approvals, termed Riverine Protection Permits (RPP), are required to destroy or disturb vegetation, excavate or place fill within a watercourse, lake or spring, which includes the bed and banks of a watercourse.

The Water Act defines a watercourse as a river, creek or other stream, including a stream in the form of an anabranch or a tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events—

- a) in a natural channel, whether artificially modified or not; or
- b) in an artificial channel that has changed the course of the stream

Exemptions apply from requiring a RPP if the development meets certain specifications or is carried out by particular approved entities. The exemptions are outlined in the guideline *Riverine Protection Permit Exemption Requirements, Version 1.01*. Queensland Government departments are listed as approved



entities and therefore do not require an RPP provided that the works within the watercourse meet the minimum requirements outlined in the exemption guideline.

### 6.2.3 Commonwealth policy

#### Whitsundays Plan of Management

The WPOM sets the management intent of the Whitsunday Planning Area within the Commonwealth Great Barrier Reef Marine Park with a focus on the world heritage values.

The WPOM provides a range of setting areas which place limits on vessel length, group sizes, operation of vessels and aircraft, facilities and certain activities.

The settings identified in the WPOM for Whitsunday Island are summarised in Table 17.

**Table 17 Settings identified in WPOM for Whitsunday Island**

Setting	Setting Description	Areas
1 – Intensive	Areas in this setting are immediately adjacent to urban areas and resorts. They are the access points to the Planning Area and a focus for intensive tourism and recreation. The areas are heavily used by a wide range of craft, and contain permanent facilities (for example, marinas, jetties and boat ramps).	<i>None on Whitsunday Island</i>
2 - High Use	This is a natural setting that may have high levels of visitation. The areas in this setting are easily accessed, and appropriate facilities (for example, pontoons, moorings, markers) may be required to manage impacts and assist in visitor appreciation of the area. The areas are regularly visited by larger vessels and aircraft.	Southern Whitsunday Island Whitehaven Beach
3 – Moderate Use	This is a natural setting that may have moderate levels of visitation, with appropriate moorings and management facilities to manage impacts. The areas in this setting are occasionally visited by larger vessels and aircraft.	South Whitsunday Island South-eastern Whitsunday Island Tongue Bay
4 – Low Use	This is a natural setting that has low levels of visitation. The areas in this setting are generally free from facilities, larger vessels and aircraft.	East Whitsunday Island Gulnare Inlet West Whitsunday Island
5 - Protected	This is a protected natural setting that has areas of outstanding or unique conservation value and areas of special management concern. Operations conducted in these areas are limited and managed according to individual site plans.	Hill Inlet

### 6.2.4 Queensland Government policy

#### Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013 Management Statement

The QPWS's Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013 provide specific actions and guidelines for the island's management.

#### Whitsunday and Mackay Islands Visitor Management Strategy 2007

The Whitsunday and Mackay Islands Visitor Management Strategy provides a framework for future management of visitors to national parks and adjacent beaches.

The Strategy identifies visitor management settings for different areas on Whitsunday Island as summarised in the table below.

**Table 18 Settings for Whitsunday Island identified in Whitsunday and Mackay Islands Visitor Management Strategy**

Setting	Setting Description	Areas
High Use	Sites providing a focus for tourism	Tongue Point Lookout Beach Betty's Beach South Whitehaven Beach Chance Bay
Moderate Use	Sites providing for significant levels of tourism and local recreation	Central Whitehaven Beach Sawmill Beach Dugong Beach Dugong-Sawmill Walking Track
Natural	Visitor sites generally free of facilities	Joes Beach Naris Beach North Whitehaven Beach Peter Bay Whitsunday Peak Walking Trail
Protected	Natural areas set aside for conservation with minimal visitor use	Hill Inlet Far North Whitehaven Beach

Permanent facilities including walk trails are not permitted in protected settings.

### **Master Plan for Queensland's park and forests to 2025**

The Master Plan for Queensland's parks and forests to 2025 is the QPWS strategic document. A living document will guide the next decade of park and forest management in Queensland.

In relation to ecotourism, the document states there is an opportunity for "encouraging and supporting an ecotourism industry that contributes to the conservation of our natural areas". One of QPWS's five core service areas is "facilitating ecotourism, recreation and heritage experience within the protected area estate".

### **Queensland Ecotourism Plan 2016-2020**

The Queensland Ecotourism Plan 2016-2020 was developed in response to the challenges and changes impacting tourism, with a vision for sustainable development of Queensland's ecotourism industry.

One of the five strategic directions identified is "showcasing the world-renowned Great Barrier Reef".

### **Implementation framework – Ecotourism facilities on National Parks**

This framework provides a robust and transparent model for the assessment and approval of proposals for ecotourism facilities. The framework defines seven overarching principles to guide the consideration of ecotourism facilities in national parks listed in Table 19:

**Table 19 Overarching principles**

<b>Principle 1</b>	Ecotourism facilities on national parks are located, designed and managed sensitively to ensure compatibility with the natural and cultural values of the national park.
<b>Principle 2</b>	Ecotourism facilities on national parks should offer unique or innovative visitor experiences.
<b>Principle 3</b>	Diverse experiences and settings are promoted.
<b>Principle 4</b>	Ecotourism facilities will provide for the public interest.
<b>Principle 5</b>	Successful ecotourism operations are characterised by commercial operators who have commitment to environmental best practice.
<b>Principle 6</b>	The authorisation of ecotourism facilities will be consistent and transparent while protecting the intellectual property of the Proponent.
<b>Principle 7</b>	The type and duration of authorities granted will recognise the level of investment and rate of return on investment.

### Best practice ecotourism development guidelines

The Best Practice Ecotourism Development Guidelines (October 2015) were developed by the Department of National Parks, Sport and Racing to assist applicants applying for ecotourism development under section 35 of the NC Act.

The following Best Practice Criteria, listed in Table 20, is intended to assist applicants to demonstrate that the proposed Ecotourism Operation meets the requirements of the NC Act:

**Table 20 Best Practice Criteria**

<b>Criterion 1</b>	The operation is compatible with the natural and cultural values of the national park.
<b>Criterion 2</b>	The operation is designed to fit within the character of the national park.
<b>Criterion 3</b>	The operation minimises its footprint on the Site.
<b>Criterion 4</b>	The operation contributes to protecting and positively enhancing the national park.
<b>Criterion 5</b>	The operation engages, involves and benefits Traditional Owners and local communities.
<b>Criterion 6</b>	The operation encourages visitors to appreciate and want to protect and conserve the national park.

### 6.2.5 Values based park management framework

The Values Based Park Management Framework is a transparent and adaptive approach to meeting the department's park planning and management accountabilities.

Adaptive management builds upon current management practices to improve our management.

- Planning and prioritisation sets and prioritises strategic directions and objectives based on park value
- Monitoring provides information on the condition and trend of values and measures our progress towards goals and objectives
- Evaluating and reporting on our performance helps us understand if we are managing parks effectively.

QPWS are currently undertaking an assessment of the park's values based on the Values Based Park Management Framework.

Following are the draft interim key values for Whitsunday Islands National Park as a whole, not solely for Whitsunday Island. These are subject to change until their assessment is complete and has been through the approval process:

- Traditional Owner Connection to Country (links to OUV 9)
  - The greater Whitsunday region holds cultural heritage values for the Traditional Owners—the Gia, Juru and Ngaro people. The values are inherited from past generations and are maintained today, continuing the ancient responsibility to manage land and sea areas for future generations.

- Being sea country specialists, the Traditional Owners historically used the rich marine resources of the intertidal zones, fringing reefs and surrounding seas to operate a marine economy and support their community. As skilled navigators, they travelled from island to island in outriggers and canoes.
- Rock shelters, middens, art sites, quarries, stone fish traps and sites of spiritual importance remain as evidence of historical occupation throughout the wider Whitsunday area
- Known sites are found on Whitsunday, Hook, Border, Cid, Hayman (not national park), Lindeman, Little Lindeman, Long, Saddleback and South Molle islands.

### Visitor experience

- 'Whitehaven Bay' incorporating Whitehaven Beach, Hill Inlet and Tongue Point on Whitsunday Island and Chalkies Beach on Haslewood Island (links to OUV 7)
  - Whitehaven Beach and Hill Inlet are of exceptional natural beauty. Whitehaven Beach is specifically given as an example for the criteria for OUV 7 in the GBRWHA listing. Pure white silica sand, crystal-clear water and the lush, green undeveloped coastline and island/ocean backdrop all contribute to this unique and world-renowned location.
  - Marketed internationally, it is an iconic tourist destination and is one of the most recognisable natural sites in Australia. Visitors flock to Whitehaven Beach and Tongue Point daily to immerse themselves in the 'postcard' image of Whitehaven paradise and experience a connection with this world-heritage site.
  - Visitors typically arrive at the destination via commercial vessel/tour, private vessels and some via commercial helicopter flights landing on Whitehaven Beach
  - Most visitors are day-trippers that enjoy walking, swimming and relaxing on Whitehaven Beach and completing the walking tracks from the southern end of the beach to other bays and lookouts on the island
  - Tongue Point is also extremely popular with lookouts and walking tracks from which visitors can enjoy the iconic, world-class view of spectacular Whitehaven Beach and Hill Inlet. Visitors can only arrive at Tongue Point by boat.
  - Chalkie's Beach on Haslewood Island is now also very popular with visitors. It has the pure white silica sand, clear waters and tropical island views typical of that expected at Whitehaven Beach
  - Walking tracks, lookouts and camping and day-use areas provide visitors the opportunity to safely explore and enjoy this world heritage location. Facilities include:
    - Whitehaven Beach camping and day-use areas
    - Solway circuit (Whitehaven Beach)
    - Chance Bay track (Whitehaven Beach)
    - Lookout Beach track (Tongue Point)
    - Hill Inlet lookout and track (Tongue Point)
    - Chalkie's Beach camping and day-use areas.
- Dune communities (links to OUV10)
 

Dunes on Whitsunday, Haslewood, Gloucester and Molle islands host a number of significant and restricted vegetation communities. Gloucester Island supports a very rare grassland that occurs on sand dunes (RE 8.2.9).

### 8.2.2 EPBC – Critically endangered; BioS – Endangered

- Semi-evergreen microphyll vine thicket to vine forest, on coastal dunes.

**Values:** Classified by EPBC as critically endangered littoral rainforest and coastal vine thicket. Habitat for *Bonamia dietrichiana*, *Brachychiton compactus*, *Cassia* sp. (Paluma Range G. Sankowsky + 450), *Macropteranthes fitzalanii*, *Rourea brachyandra*, *Senna acclinis*. Habitat for endemic snails and migratory

birds – particularly significant for fruit pigeons. Mapped as within the Whitsunday Island National Park (Hayman Island).

#### 8.2.7e BioS – Endangered

- *Melaleuca* spp. and/or *Lophostemon suaveolens* and/or *Eucalyptus robusta* open woodland to open forest in wetlands associated with parabolic dunes.

**Values:** a naturally rare and restricted vegetation community. Occurrence on Whitsunday and Haslewood islands is the largest representation of this RE on an island protected area.

#### 8.2.9 BioS – Endangered

- Tussock grassland on coastal dunes.

**Values:** Very rare. This is the only grassland RE on sand dunes in the Central Queensland Coast bioregion. Its extent in protected areas is low. Outside protected areas it is subject to development pressure and erosion associated with recreation and grazing.

- Open shrubland

Open shrublands (RE 8.12.29) add to the scenic mosaic of vegetation on the Whitsunday islands and are habitat for a number of significant species.

#### 8.12.29 BioS – Of concern

- *Allocasuarina littoralis* and/or *Lophostemon confertus* and/or *Acacia* spp. and/or *Grevillea banksii* open shrubland on islands and headlands, on Mesozoic to Proterozoic igneous and Tertiary acid to intermediate rocks.

**Values:** Habitat for *Solanum graniticum* (NCA – E), *Ozothamnus eriocephalus* (NCA – V, EPBC – V), *Croton magneticus* (NCA – V).

Whitsunday Island, Lindeman Island and Gloucester Island national parks together contain 78% of the occurrence of this ecosystem in Queensland's protected areas.

- Hill Inlet estuarine wetland

The estuarine wetland of Hill Inlet on Whitsunday Island is unique within the group of island parks, being the most substantial wetland present on any island. It is also habitat for a number of significant regional ecosystems and species, including migratory shorebirds.

#### 8.1.2 BioS – Of concern

- Samphire open forland on salt pans and plains adjacent to mangroves.

**Values:** Habitat for *Tecticornia indica*, *Tecticornia halocnemoides* subsp. *tenuis*, *Sarcocornia quinqueflora*, *Tecticornia pergranulata* subsp. *queenslandica* which are largely restricted to this ecosystem. Many of the plant species defining this vegetation type are unique to it. Habitat for the significant species beach stone-curlew *Esacus magnirostris* (NCA – V), eastern curlew *Numenius madagascariensis* (NCA – V, EPBC – CE), lesser sand plover *Charadrius mongolus* (NCA – V, EPBC – E), Pacific golden plover *Pluvialis fulva* (NCA – SL) and whimbrel *Numenius phaeopus* (NCA – SL).

#### 8.1.3 BioS – Of concern

- *Sporobolus virginicus* tussock grassland on marine sediments.

**Values:** This RE is not well represented in protected areas. Its occurrence on Whitsunday Island is the largest representation of this RE on an island protected area. Many of the plant species defining this vegetation type are unique to it, or only to this and other land zone 1 regional ecosystems.

- Grasslands

Grasslands add to the scenic mosaic of vegetation on the Whitsunday islands and are habitat for a number of significant species.

#### 8.12.13a and 8.12.13b BioS – Of concern

- Tussock grassland, or *Xanthorrhoea latifolia* shrubland, including areas recently colonised by *Timonius timon* var. *timon* shrubland, on slopes of islands and headlands, on Mesozoic to Proterozoic igneous rocks and Tertiary acid to intermediate volcanics

**Values:** Habitat for *Dichanthium setosum* (EPBC – V). The unadorned rock-wallaby *Petrogale inornata* feeds on these grasslands on Whitsunday Island. This is the only natural island population of this species. It is naturally balanced, disease-free and has adapted to live in denser forest, but still mainly feeds on grasses. As the population has been isolated for several thousand years, it may be genetically distinct.

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# 7 Social impact assessment

## 7.1 Introduction and purpose

The Social Impact Assessment (SIA) assesses all social impacts relevant to the feasibility study for premium ecotourism products on Whitsunday Island and identifies options to minimise negative impacts and leverage positive impacts.

The chapter focuses on:

- Describing the social context and the impact baseline relative to the identified potential product offering
- Identifying impacts relative to the identified stakeholders
- Identifying possible mitigation and enhancement strategies.

Tourism is one of the three pillar industries for the Whitsunday regional economy. According to the *Whitsunday Regional Economic Development Strategy 2017-2021*<sup>9</sup>, the key industries in the region, which include manufacturing, transport services and construction, are closely integrated with the three pillars (tourism, mining and agriculture), through local supply chain links. The strategy also identifies that population-driven industries like retail trade, personal services and key service sectors such as health and education, are directly and indirectly reliant on the three pillars.

The Whitsunday region has a healthy visitor economy serving diverse markets including families, backpackers and international visitors who drive the tourism market. The region is attractive to overseas visitors for its safe, clean and nature-based attributes and proximity to Asia.

Tourism is one of the largest employers in the region, with the opportunity to expand the current offering. The purpose of this chapter is to outline the likely social benefits and impacts that may arise from a new offering, as proposed in this feasibility study.

## 7.2 Study area

Regional and local strategic planning documents were used to inform the social baseline. It also considers the Australian Bureau of Statistics data at the SA3 level (Whitsunday)<sup>10</sup> and at the State level for demographic data. Potential alternative study areas described by the SA4 or the local government area extend significantly inland and comprise considerably greater diversity in social conditions and are therefore considered inappropriate for this application.

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<sup>9</sup> [Whitsunday Regional Council Economic Development Strategy 2017-2021](#)

<sup>10</sup> [ABS Whitsunday SA3](#)

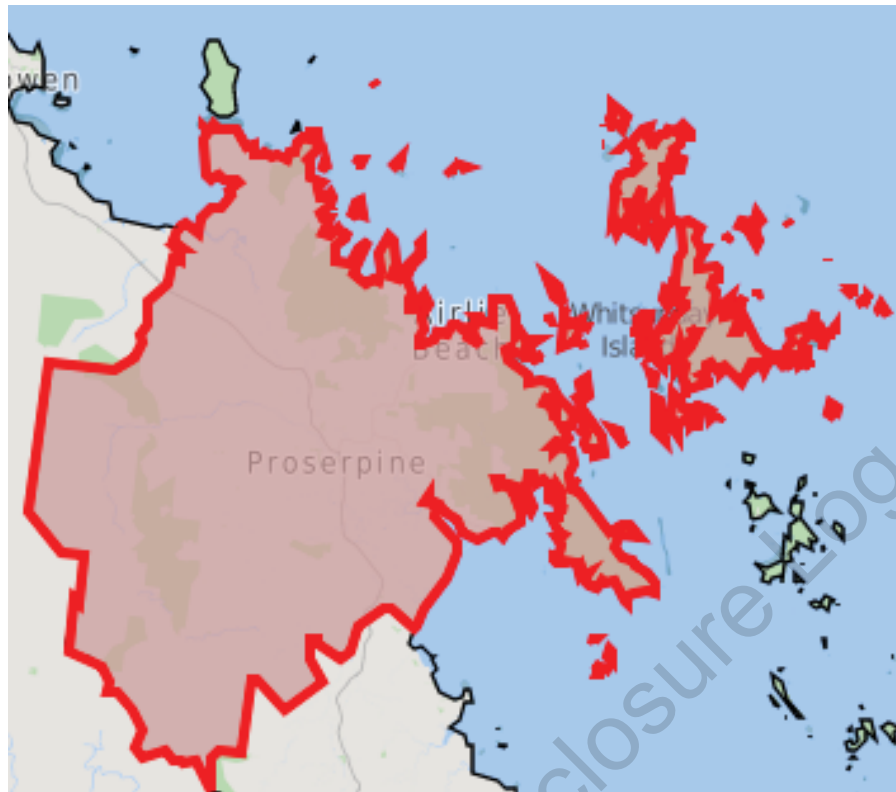


Figure 7 Map of Whitsunday SA3

## 7.3 Local policy context

### 7.3.1 Whitsunday Regional Council Community Plan 2011-2021

The community plan was developed in 2010-2011 as a requirement of the *Local Government Act* at that time. Development of a community plan is no longer a requirement for local government and it has not been updated since 2011<sup>11</sup>.

Broad community consultation was undertaken for the development of the community plan. The community vision, aspirations and values outlined in the plan are therefore considered to remain of relevance.

The vision for the Whitsunday region includes elements that are highly relevant to the proposed ecotourism operations such as:

- Promotes sustainability and long-term sustainable development
- Promotes and preserves our culture and our history
- Protects our past, but promotes our future
- Protects our precious natural resources and environment
- Is proactive, healthy and encourages participation in physical activity
- Has the infrastructure and facilities which promote and encourage a healthy and active lifestyle
- Is proud of its identity and its people.

The Whitsunday Regional Council's (Council) desired vision for the tourism industry is to pursue, in conjunction with tourism agencies and bodies, the promotion and enhancement of existing tourism operations and the creation of new tourism opportunities.

Relevant community feedback received whilst developing the Community Plan includes that Council should:

<sup>11</sup> [Whitsunday Regional Council Community Plan 2011-2021](#)



- Maintain and develop a focus of integrated tourism within the region including the promotion of the region as a tourism destination
- Enhance, maintain and develop opportunities and facilities for tourists and residents in the region including a Traditional Owner cultural/interpretive centre, land-based tourism opportunities, heritage-based tourism, art galleries, golf course, movie theatre, bowling alleys, facilities for RVs, caravans, campervans and the like
- Encourage and promote further investment in the region through public private partnerships.

The desired environmental and sustainability vision in the report is to plan for, develop, protect and enhance the lifestyle and wellbeing of residents and environment.

Relevant community feedback received whilst developing the Community Plan includes that Council should:

- Protect our key vistas and areas of environmental significance
- Reduce impacts on the Great Barrier Reef
- Consider integrated and sustainable planning outcomes
- Consider principles of ecologically sustainable development
- Protect, maintain and enhance areas that are environmentally significant and have high ecological value
- Protect and conserve areas of natural and cultural significance
- Acknowledge the importance of the tourism industry in protecting and conserving our natural environment
- Consider ecotourism opportunities that promote protection and conservation of the environment.

### 7.3.2 The Whitsundays Destination Tourism Plan 2014-2020

*The Whitsundays Destination Tourism Plan*<sup>12</sup> (DTP) was drafted by Whitsundays Marketing and Development Limited in partnership with Tourism and Events Queensland and Whitsunday Regional Council. Research to develop the DTP included desktop review of existing key plans and strategies, review of local industry and stakeholder consultation (Airlie Beach, Bowen, Collinsville and Proserpine 2013 tourism forums), industry focus group and steering committee workshops, and individual key business and government stakeholder consultation undertaken in early 2014.

At the time of development of the DTP, the Queensland Government identified the tourism industry as one of four key pillars that will drive economic development and growth. The Whitsunday region aims to raise expenditure from \$705 million in 2012-2013 to \$1.24 billion in 2019-2020 and the DTP seeks to guide the industry in reaching this target and achieving its vision that, 'by 2020 the Whitsunday region will be globally recognised as one the world's leading tropical island and marine leisure holiday destinations.'

The top opportunities and challenges the region faces in achieving the 2020 growth in annual visitor expenditure are identified as follows:

Top opportunities:

1. Regional population growth
2. Optimise the region's marketing outcomes
3. Product and facilities development
4. Events development
5. Developing drive tourism
6. International access potential of Whitsunday Coast Airport.

Top challenges:

1. Threats to and decline in the marine and natural environment

<sup>12</sup> [The Whitsundays Destination Tourism Plan 2014-2020](#)

2. High cost of doing business in Australia
3. Impacts of severe weather events
4. Lack of mainland product and activities
5. Attracting, developing and retaining a skilled workforce.

The DTP summarises that from a resident's perspective, with approximately a quarter of jobs in the region being in the tourism industry and the Whitsunday region's lifestyle driving significant residential growth, there is great appreciation of, and support for, the tourism industry and its continued growth.

The DTP recommends the *Whitsundays Ecotourism Strategy* (2008) should be revisited as the product, ecotourism, aligns well with the strategy to maintain and promote the unspoilt natural environment. Furthermore, the DTP references the Queensland Ecotourism Plan 2013-2020 as its vision is closely aligned with the DTP. The key relevant strategy is to develop opportunities to engage visitors in experiencing the region's parks, reserves, marine environments and so on, with a focus on new or refreshed events, products and infrastructure.

## 7.4 Social impact baseline

The following table provides a summary of the demographic profile of the Whitsunday region compared to that of Queensland.

**Table 21 Demographic profile**

	Whitsunday SA3	Queensland
<b>POPULATION</b>		
Total population*	22,215	4,928,457
Male (no.)	11 315	2,403,286
Female (no.)	10 525	2,445,591
Indigenous population (%)	2.8	4
Age profile	36.5 years old	37 years old
<b>ETHNICITY &amp; LANGUAGE</b>		
Total born overseas (%)	16.9	21.6
Speaks a Language Other Than English at Home - Proportion of total population (%)	5.8	11.9
<b>EDUCATION</b>		
Completed Year 12 or equivalent (%)	41.4	50.5
With Post School Qualifications (%)	64.1	57.6
Unemployment rate (%)	5.8	7.6
Average household size (no. of persons)	2.4	2.6
Average monthly household rental payment (\$)	1367	1452
Average monthly household mortgage payment (\$)	1851	892
Household income (\$ per week)	842	856
<b>BUSINESSES &amp; INDUSTRY</b>		
Number of businesses (no.)	2489	437,637
Highest number of businesses by industry (no.)	Construction (449)	Construction (41, 129)
Main employing industry (%)	Accommodation and food services – 20.6	Health care and social assistance - 13
Tourist Accommodation Establishments with 15 or more rooms (no.)	27	1235

	Whitsunday SA3	Queensland
<b>TRANSPORT USE</b>		
Total Registered Motor Vehicles (no.)	16 825	3,771,325
Passenger vehicles (no.)	9 919	2,715,054

\*ABS Whitsunday SA3 demographics<sup>13</sup>

### 7.4.1 Tourism profile

The Whitsunday region had 545,000 domestic overnight visitors in the year ending December 2017, which represents a 5.3 per cent growth over the past three years. The region had 241,000 international visitors in the year ending December 2017, a 2.8 per cent year-on-year decline.<sup>14</sup>

Overall intrastate (within Queensland) were the biggest market to visit the region with 45.6 per cent; international visitors made up 30.7 per cent of the market and 23.8 per cent of the market visited from interstate.

### 7.4.2 Social infrastructure

The following infrastructure has been identified:

#### Health and emergency services

- Proserpine Hospital
- Proserpine Fire Station
- Queensland Ambulance Service Proserpine
- Whitsunday Disaster Coordination Centre
- Maritime Safety Queensland
- Volunteer Marine Rescue Whitsunday.

#### Education and childcare facilities

- TAFE Queensland Whitsundays Campus
- C&K Whitsunday Community Kindergarten
- Whitsunday Christian College
- Cannonvale Rainforest Child Care Centre.

#### Disability and elderly care facilities

- Blue Nursing Service
- Mobility Whitsunday
- AOM Proserpine
- Proserpine Nursing Home
- Centrecare North Queensland.

#### Public sport, recreation, leisure and cultural facilities

- Whitsunday Leisure Activity Centre
- Proserpine Tourists Park

<sup>13</sup> [ABS Whitsunday SA3](#)

<sup>14</sup> [Tourism and Events Queensland - Whitsundays Regional Snapshot](#)

- Wangaratta Caravan Park
- Heart of the Reef Transit Facility
- Whitsunday Sports Park
- Airlie Beach Lagoon
- Proserpine Swimming Pool.

From the data collated, the following key conclusions can be made on the social impact baseline:

- Unemployment is below the state average but is still over five per cent
- The predominant employing industry is accommodation and food services
- Construction is the industry with the highest number of businesses, however accommodation and food services employ the highest number of individuals
- The local community understand and appreciates tourism as a key industry for the region and therefore wants to protect and enhance it
- The local community wants to protect and conserve areas of natural significance
- Domestic tourists are the largest market to visit the Whitsunday region.

### 7.4.3 Assumptions and limitations

The SIA has been carried out through a desktop analysis. No direct engagement has been undertaken to inform the social impact assessment, however reference is made to existing engagement findings through the local policy context.

**Table 22 Summary of social impact baseline**

Problems/opportunities/service identified in the Social Impact Baseline	Key drivers
Unemployment is below the state average but is still over five per cent	Job creation
Main employing industry is accommodation and food services	Support of local industry
Construction is the industry with the highest number of businesses however accommodation and food services employ the highest number of individuals	Diversify local industry
The local community understand and appreciates tourism is a key industry for the region and therefore want to protect and enhance it	Respect and understand community values to maintain support for tourism
The local community want to protect and conserve areas of natural significance	Environmental management and conservation
Domestic tourists are the largest market to visit the Whitsunday region.	Investment to grow domestic and international tourism market

## 7.5 Social impact assessment

Table 23 below is a list of identified social impacts for the Project. The social impacts have been grouped into the following categories:

- Cultural and heritage impacts – impacts on cultural or heritage values
- Character impacts – impacts on the character of Whitsunday Island
- Environmental impacts – impacts on the natural environment
- Recreational impacts – impacts on existing recreational facilities
- Livelihood impacts – financial impacts on the local community and industry.

**Table 23 Identified social impacts**

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
<b>Cultural and heritage impacts</b>			
1. Proposed operations potentially misalign with cultural and heritage values	Traditional owners Local community	Long-term	Collaborate with Traditional Owners during the development phase of the recommended ecotourism operation to identify opportunities to align the Project with cultural and heritage values.  Protect these values and showcase them where appropriate.
2. Physical impacts on cultural or heritage sites or artefacts	Traditional owners	Long/short-term	Involve Traditional Owners during the delivery phase of the Project to identify sensitive sites and enable design of the Project to avoid these sites.  Engage archaeological specialists as needed during construction of the Project to identify opportunities to adjust Project construction to reduce risk of physical impacts
3. Awareness of cultural and heritage values	Traditional owners Council	Long-term	Encourage operators to work with Traditional Owners and local historians to highlight culture and heritage interpretation in their product/s.  Investigate involving Traditional Owners in the delivery of the walk experience.

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
<b>Character impacts</b>			
1. A change of character for the national park with introduction of eco-accommodation	DES Council Local environment groups Community	Long-term	Align the development of the ecotourism operation with the Queensland Government's Best Practice Ecotourism Development Guidelines built on legislative requirements. <sup>15</sup> In particular, to ensure the accommodation design and layout fits within the character of the national park and minimises its footprint on the site.
2. Potential change to natural, preserved character of island	As above	Long-term	Ensure the ecotourism operation design and experience incorporate the natural and cultural values of the site in order to reduce the risk of changing the island's character.  Align the development of the ecotourism operation with the Queensland Government's Best Practice Ecotourism Development Guidelines built on legislative requirements as above.
3. During construction the increased activity will change the character of the island	Council Visitors	Short term	Implement an Environmental Management Plan to identify opportunities to adjust Project construction activities to reduce risk of harming the natural character of the island.  Carry out construction during off-peak period to reduce impact on visitor experience.
4. Depending on location of proposed accommodation, there is a potential for change of views from key island destinations such as Whitehaven Beach.	DES Council Community Operators	Long-term	When selecting locations for the proposed ecotourism operation consider the Queensland Government's 'Best Practice Criteria' and ensure visual amenity is factored in to reduce the impact on surrounding views.

<sup>15</sup> [Queensland Government Best Practice Ecotourism Development Guidelines 2015](#)

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
<b>Environmental impacts</b>			
1. Opportunity to deliver ecologically sustainable, low impact experience that protects and showcases natural values	DES Council Local and national environment groups	Long-term	Ensure project is ecologically sustainable and low impact.
2. Change in island ecosystem due to introduction of new operation	DES Council Local and national environment groups	Long-term	Refer to Environmental Impact Statement (EIS).
3. Impact on waterways from accommodation and increased visitors	Council DES Local environment groups	Long-term	Refer to EIS.
4. Impact on flora and fauna from increased visitors and general operation of proposed ecotourism	Council DES Local environment groups	Long-term	Refer to EIS.
5. Protection of natural assets	Council DES Local environment groups	Long-term	Refer to EIS.
6. Proposed ecotourism promotes protection and conservation of the environment.	Council DES	Long-term	Ensure recommended ecotourism operation contributes to protecting and positively enhancing the national park.  Encourage operators to incorporate interpretive elements that highlight the importance of the natural environment and what makes Whitsunday Island a unique ecosystem.

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
7. Additional pressure on natural resources	Council DES Local environment groups	Long-term	Refer to EIS.
8. Loss of vegetation due to construction of new operation	Council DES Local environment groups	Short-term	Ensure the operation design and fit-out consider the natural value of the site and minimises its footprint.  Implement an Environmental Management Plan during construction to help protect vegetation.
9. General construction impacts on flora and fauna – dust, visual amenity, water usage	Council DES Local environment groups	Short-term	Implement Environmental and Construction Management Plans to help manage dust impacts, visual amenity and water usage during construction.
10. Noise impacts on native animals during construction	Council DES Local environment groups	Short-term	Implement an Environmental Management Plan during construction to help protect native animals and minimise noise.
<b>Recreational impacts</b>			
1. Opportunity to participate in new low impact experiences that are ecologically and economically sustainable	Visitors	Long-term	Ensure project delivers ecologically and economically sustainable, low impact experiences accessible to a wide range of potential visitors
2. Opportunity to participate in ecotourism and heritage experiences	Visitors	Long-term	Ensure project facilitates ecotourism and heritage experiences that accessible to potential visitors
3. Potential shift in popularity of existing activities	Council Local industry groups and chamber of commerce Existing operators	Long-term	Engage and involve Council through development phase of Project to help manage the potential shift and preparedness of industry.  Engage local industry to better understand their concerns and identify opportunities to help introduce ecotourism operations.



Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
4. Introduction of new product results in new visitor categories i.e. those willing to spend more for a premium experience	Local industry groups and chamber of commerce Tourism Whitsundays	Long-term	Engage local industry to identify market opportunities for new visitor category.
5. Increased visitor numbers creating extra demand on local services	Council Community	Long-term	Engage and involve Council through development phase of Project to better understand how the new operation will impact local services. Assist in identifying opportunities for land-based businesses.  Conduct market research to determine the potential demand for the proposed product.  Refer to CBA.
6. Impact on existing island recreational activities - shift in patronage from current offerings to new product, reducing 'wear and tear' on other island facilities/resources	DES	Long-term	Consider promoting low impact alternatives to other markets and rehabilitating lesser used areas.
7. Impact on existing recreational island activities - increased visitation to island may result in placing greater demand on island facilities/resources	DES	Long-term	Ensure the Project is designed to be easy to maintain in order to reduce wear and tear and able to resource Projected demand.
8. Introduction of new product promotes overall regional offering	Council Tourism and Events Queensland Tourism Whitsundays	Long-term	Encourage operators to engage key stakeholders to ensure the product considers and enhances the regional offering.
9. Temporary closure of existing recreational activities during construction	DES Visitors	Short-term	Undertake construction during the off-peak period to minimise the impact on visitors.  Program construction effectively to minimise the impact on existing activities.

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
<b>Livelihood impacts</b>			
1. Increased competition and loss of market share to existing tourism operators	Existing operators Local industry groups and chamber of commerce Council Tourism Whitsundays	Long-term	Engage and involve council through development phase of Project to help manage the potential shift in market and preparedness of industry.  Engage local industry to better understand their concerns and identify opportunities to help introduce ecotourism operations.  Tourism Whitsundays to engage and involve Tourism Whitsundays and council through development phase of Project.  Refer to CBA.
2. Increased visitor numbers creating additional pressure on tourism services, providing additional custom for existing tourism operators	Local industry groups and chamber of commerce Existing operators Council Tourism Whitsundays	Long-term	As above
3. Increased visitor numbers creating additional pressure on natural resources resulting in reduced visitor experience and negatively impacting industry providers product	Local industry groups and chamber of commerce Existing operators Council Tourism Whitsundays	Long-term	Carry out an EIS to determine what impacts the proposed operation will have on the natural resources.  Undertake research to better understand the current market and to help avoid oversaturation.  Refer to CBA.

Potential social impact element	Stakeholders potentially impacted	Duration	Opportunities to mitigate/leverage
4. Introduction of new market – adventure/ ecotourism market – diversifies market opportunities	Council Local industry groups and chamber of commerce Tourism Whitsundays	Long-term	Engage and involve council through development phase of Project to assist in seeking new business opportunities.  Engage local industry to identify opportunities to help introduce ecotourism operations.
5. Temporary closure of existing recreational activities during construction	Existing operators Council Tourism Whitsundays	Short-term	Undertake construction during the off-peak period to minimise the impact on visitors.  Program construction effectively to minimise the impact on existing activities.  Provide advance notification to existing operators of any planned disruptions.
6. Increased market demand for businesses that cater for visitor needs before and after ecotourism operation	Council Local industry groups and chamber of commerce Tourism Whitsundays	Long-term	Encourage operators to engage with key industry stakeholders to enhance the product, whilst growing business opportunities for the main land.  Refer to CBA.
7. Increased employment opportunities including opportunities to engage, involve and benefit Traditional Owners.	Council Local industry groups and chamber of commerce Traditional Owners	Long-term	Engage council, local industry and Traditional Owners during the development of the Project to help pursue employment opportunities.  Refer to CBA.

## 7.6 Summary of findings

The social impact assessment has identified the following key potential impacts:

- Improved employment opportunities in the local area
- Competition for existing businesses who offer a similar product or operate a tourism activity within the vicinity of Whitsunday Island
- Cultural and heritage impacts
- Adverse environmental impacts on Whitsunday Island.

These impacts can be reduced by implementing the mitigation strategy identified for each impact. Overall, it is recommended that during the next phase of the Project a comprehensive engagement program be delivered targeting Council, Tourism Whitsundays and local industry. The proposed product is on the island and social impact will be largely contained to this area. However, engagement with stakeholders will help identify their views and potential opportunities to leverage from the introduction of a new ecotourism operation.

It is vital the product considers environmental and cultural heritage impacts. Again, further engagement is recommended with related stakeholder groups to ensure the product aligns with the natural and cultural values of Whitsunday Island. How the product is marketed will be important and it should align with the Queensland Government's 'Best Practice Ecotourism Development Guidelines', and Tourism and Events Queensland's and Tourism Whitsundays brand and marketing activities.

Involving the local council and Tourism Whitsundays in the next phase of the proposed product will assist DES to better understand potential concerns and identify opportunities for partnership when engaging the local community. DES will be able to help the local council manage potential impacts on the tourism market and preparedness of the industry.

## 8 Stakeholder and community consultation

### 8.1 Introduction and purpose

This chapter summarises the Stakeholder and Community Consultation Plan created for this stage of the Project. The chapter focuses on:

- Identification and analysis of key stakeholders
- The approach that was implemented during consultation
- Summarising the findings from consultation
- Recommendations for the next phase of consultation.

A Stakeholder and Community Consultation Plan was developed identifying relevant stakeholders and setting out the purpose, process and timelines for engagement for the Project. A Traditional Owner Consultation Plan was also developed separately, and this is contained in Appendix E.

The key engagement objective for this phase of the Project was to support the assessment of options for the feasibility study and inform engagement for future Project phases.

Engagement outcomes will help establish a vision for ecotourism on Whitsunday Island: what is valued, what should be protected, what should be highlighted and potential opportunities.

### 8.2 Stakeholders

Sch 4 Deliberative process

- DES (I)

- DITID (I)
- QPWS (I)
- GBRMPA (E)
- Tourism organisations including Tourism Events Queensland, Queensland Tourism Industry Council and Ecotourism Australia (E).

The approach to the level of engagement for each stakeholder has been guided by the International Association for Public Participation’s ‘spectrum of engagement’ (see Figure 8). With each stakeholder assessed and an appropriate engagement level identified, the stakeholder analysis finishes with suggested measures to mitigate or leverage those issues or opportunities identified. In this case, ‘public’ refers to all stakeholders.

The full stakeholder analysis is in the Stakeholder and Community Consultation Plan in Appendix G.

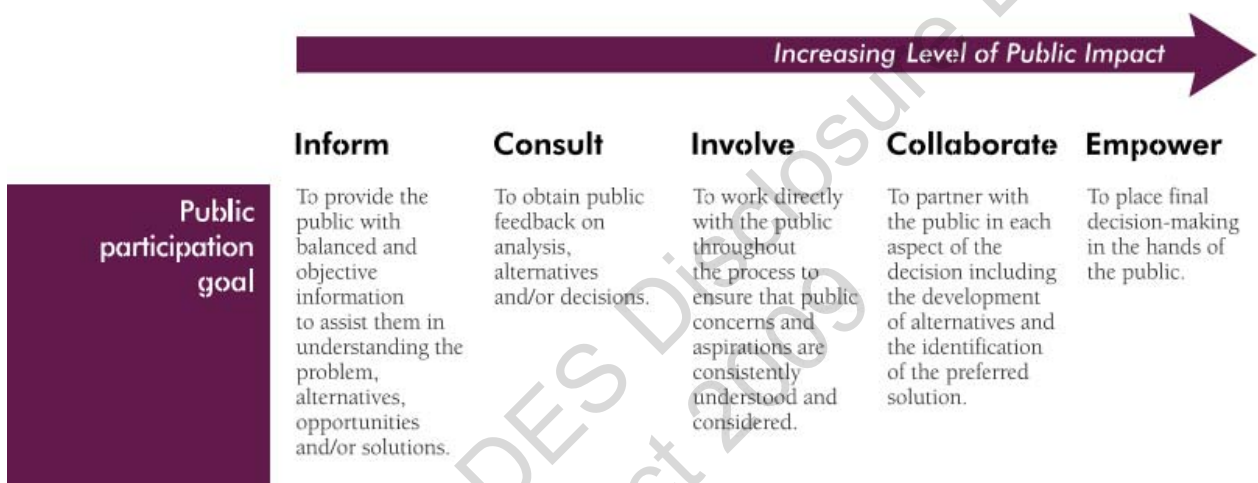


Figure 8 IAP2 Spectrum of public participation

### 8.3 Approach

Many recommendations that arose from the stakeholder analysis can be adopted and progressed during the next phase of the Project. However, a single engagement channel was adopted for the feasibility study to streamline the process and maintain focus on key stakeholder inputs.

Stakeholder consultation during this phase of the Project targeted a select group of key stakeholders such as organisations within the tourism industry, local government, environmental groups and local community groups. The targeted stakeholders provided a strong sounding board for the current ideas and opportunities being developed as part of the feasibility study, and the final list of stakeholders was endorsed by DES.

The findings will assist with shaping the next phase of the Project where the wider community can be engaged.

### 8.4 Ecotourism opportunities survey

An online survey was used to gain feedback from key stakeholders on the current ideas and opportunities being developed as part of the feasibility study.

An introductory email provided some Project background, why the stakeholder had been requested to participate and what the development of premium ecotourism facilities and experiences could achieve.

Participants were given a two-week window to complete the survey. To encourage participation key stakeholders received a follow up phone call and were given the option of completing the survey online or over the phone, depending on convenience for the individual. A reminder email was sent out four days prior to the survey closing.

A copy of the full survey, participants' details and email content requesting participation can be found in the Stakeholder and Community Consultation Plan, in Appendix G.

The stakeholders surveyed are contained in the table below, with those respondents whose email addresses/organisations could be clearly identified in the survey indicated in the column entitled "Response?".

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### 8.4.1 Survey participants

The online survey was emailed to 21 stakeholders identified by DES. Thirty-four people responded to the survey within the two-week period. Almost all participants were aged between 45 and 64 years. All participants lived in Queensland, with approximately 70 per cent identifying themselves as a local. The outcomes of the survey are set out below, under the various survey sections.

As part of the survey, participants are requested to provide their email address. From the 21 survey recipients' email addresses, it has been possible to map 11 of the survey recipients to the responding email addresses. It is noted that there were an additional 27 email addresses that cannot be matched directly with the organisations above and therefore it is not possible to identify all survey respondents. Other survey respondents not included in the table above, but identifiable by their email addresses were:

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### 8.4.2 Survey questions

Engagement questions were structured to obtain input into the overarching vision. The findings were expected to highlight key opportunities and concerns from stakeholders and to help shape the next phase of the Project.

The survey had 15 questions based around four key themes:

- What is valued?
- What should be protected?
- What should be highlighted?
- What potential opportunities are there for experiences and facilities?

The survey questions are set out below:

- What is your email address?
- What is your age?
- What is your gender?
- Where do you live/ work/ undertake business in relation to Whitsunday Island?
- What is your interest in Whitsunday Island?
- What do you think currently makes Whitsunday Island an attractive visitor destination?
- What do you think currently makes Whitsunday Island less attractive for visitors?
- Would you consider the following locations on Whitsunday Island special? (options listed)
- Are you aware of any significant environmental or cultural landmarks on Whitsunday Island that need to be protected?
- Do you think the following activities would be popular with visitors AND suitable for Whitsunday Island? (options listed).
- What type of accommodation would be appropriate for ecotourism visitors on Whitsunday Island?





## 8.6 Consultation summary – key themes

### 8.6.1 What is valued

Questions in this section of the survey looked at what should be protected and highlighted on the island.

Almost all participants value the unspoilt, natural beauty of Whitsunday Island. Participants believed visitors found the island an attractive destination because it is relatively uninhabited, creating a rich and diverse environment.

Almost half of the participants (44.12%) believed overcrowding at key locations and the general density of visitors to Whitsunday Island is less attractive for tourists. One participant stated operators have reported crowding at the lookouts and on the walking trails, particularly when several tour boats turn up at once, making the experience at either end of Whitehaven Beach less than serene.

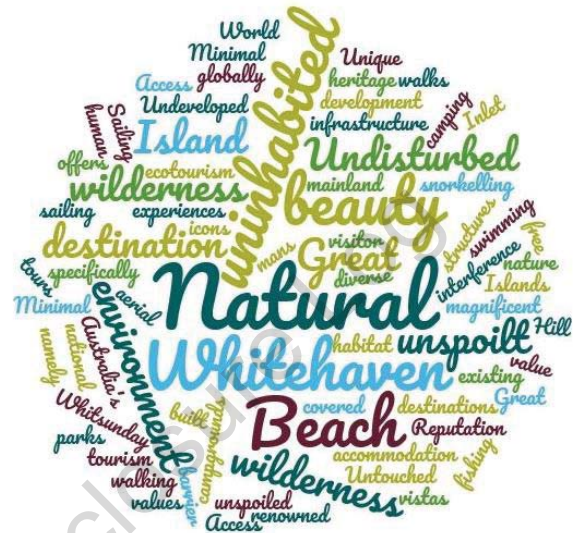
The key locations such as Hill Inlet, Tongue Bay and Whitehaven Beach are experiencing excessive numbers of visitors causing inevitable impacts like litter, erosion and general environmental impacts.

There was agreement across most participants that Whitsunday Island has many special locations, with the renowned locations such as Whitehaven Beach and Hill Inlet highlighted by all participants. Some participants did not consider the camping grounds on the island such as Dugong Beach and Nari's Beach unique.

When asked what significant environmental or cultural landmarks needed protection, the majority of participants expressed a belief that the whole island should be protected. Hill Inlet and Whitehaven Beach were two locations that many thought needed immediate protection, with one participant stating, "unfortunately we're loving it to death!"

Most participants believe all Ngāro Aboriginal sites must be preserved, with some suggesting any changes must be consulted on with the Traditional Owners.

Overall, from the participants' point of view, the wilderness and cultural values of the island are critical. If the unspoilt, natural beauty of the island is not protected, it will no longer be a desirable destination.



### 8.6.2 Opportunities

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- Online survey targeting tourists seeking feedback from potential users to help finesse the product whilst promoting Whitsunday Island. To successfully deliver this engagement tool it is recommended DES partner with DITID, Tourism and Events Queensland and Whitsunday Tourism.

Some alternatives to the above standard engagement activities could be activities such as:

- A 3D virtual reality technology tool could be utilised to demonstrate visual amenity. Participants could virtually stand from key locations on the island and see what the 'actual' impact will be to the outlook. This tool could also be used to promote key features or locations that some participants may not be familiar with, helping demonstrate the uniqueness of the product.
- A community information session activity: create a model of the product that allows attendees to walk through a condensed version of the walk and ecotourism product. Key features and locations can be highlighted through the use of images or video. The interactive map would help participants visualise the new product; or
- A full-size model of the planned eco-accommodation could be set up at the session, demonstrating the look and feel of the facilities, allaying concerns that it may not be appropriate for the site.

Upon completion of the engagement process, a summary report would be drafted capturing key figures including level of participation and demographics of participants to help demonstrate reach of engagement, an overview of activities carried out and a summary of questions raised. Further, benchmarking and follow up market research could be undertaken to determine changes to awareness, understanding and sentiment regarding the project.

### 8.7.3 Consult level of engagement

If DES found there were some areas of the Project that required more community and stakeholder input, a consultative approach to engagement opening a conversation with stakeholders could include:

- Key stakeholder forum
- Online engagement hub that seeks feedback through a survey and an online public forum
- Online polling promoted through social media channels.

Engagement in this case could have the purpose of identifying opportunities to improve the product and ways the community may benefit from it and contribute to it. The engagement summary report would also be adapted to include the feedback from these activities.

## 9 Market demand analysis

### 9.1 Introduction and purpose

This chapter of the report provides an analysis of nature-based tourism and the walking/trails sector in relation to trail development opportunities in the Whitsunday region. Analysis specifically addresses the following subject matter:

- A review of domestic and international ecotourism markets, identifying trends and visitor motivations in consuming ecotourism experiences
- An understanding of the varying requirements of different market sectors, including; luxury walking experiences, long distance walkers and the casual leisure market (short walks and other experiences)
- Identification of appropriate best practice comparators, including an assessment of their impact on the marketplace
- Review of demand for the provision of overnight 'roofed' accommodation
- A review of the Whitsunday region current visitor market and product mix. In addition to potential ecotourism developments attracting new visitors, a consideration was the potential impact on existing visitors' markets.
- Forecast tourism demand to the destination over the next 10-year period.

### 9.2 Ecotourism and walking trails visitor market

#### 9.2.1 Global trends

Tourism globally grew at 4.6 per cent during 2017, outpacing the global economy for the seventh successive year. Walking and outdoor adventure are some of the high value and high growth sectors and are identified by the World Travel and Tourism Council (WTTC) as future growth sectors<sup>16</sup>. Walking is a part of the global 'adventure travel' trend, which the United Nations World Tourism Organisation (UNWTO) estimated to have doubled in size between 2009 and 2014<sup>17</sup>. According to a study by Allied Market Research (2018) the global adventure tourism market was valued at \$444,850 million in 2016 and is projected to grow by 17.4 per cent per annum (compound annual growth rate) from 2017 to 2023 to reach a market value of \$1,336 billion in 2023. Soft adventure segment generated the highest revenue to the global market in 2016 and is similarly expected to grow at a compound annual growth rate of 17.8 per cent.<sup>18</sup>

Adventure tourism, in particular 'soft adventure' tourism such as walking, is not only a growth sector but seen as a major contributor to well-being; the sharing of economic benefits to more remote areas and building awareness of the environment and the importance of environmental protection. This trend aligns closely with the attributes and motivations of the millennial visitor segment.

The global walking market includes a wide-variety of users, seeking an even greater diversity of walking experiences from short walks to multi-day adventures, referred to as 'extended walks'. This includes a

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<sup>16</sup> WTTC *World Economic Impact of Travel and Tourism Report (2018)*

<sup>17</sup> UNWTO *Global Report on Adventure Tourism 2014*

<sup>18</sup> **Allied Market Research** "Adventure Tourism Market by Type, Activity, Type of Traveller, Age Group, and Sales Channel: Global Opportunity Analysis and Industry Forecast, 2017-2023" (2018)

growing trend towards 'destination' walks where an individual walking location becomes the primary reason for travel to a country (for example, the Camino Ways in Europe).

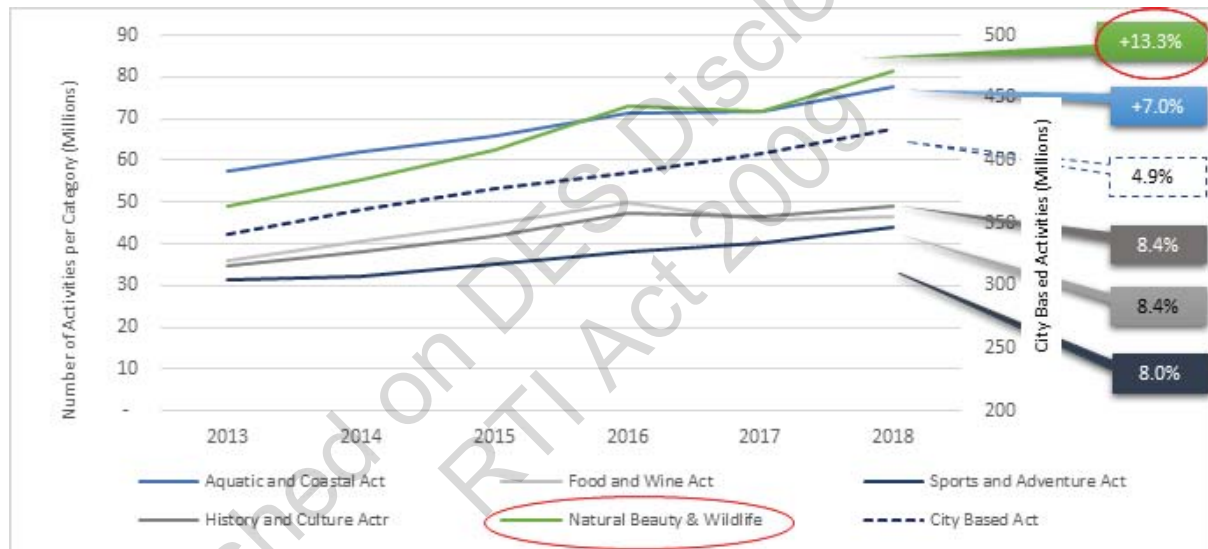
Based on the UNWTO estimates of the walking market globally, Australia currently captures less than 1 per cent of the global trade in extended walks (multi-day), whereas our neighbours in New Zealand have nearly twice that share.

### 9.2.2 National trends

Walking visitation is increasing across Australia at an average annual growth rate of 14.7 per cent per annum.

Across Australia, the majority of walking visitors were from the domestic overnight segment (48.8%), followed by domestic day (43.6%) and international (7.5%) visitors. The greatest growth has been by domestic day visitors (18.2% increase per annum), followed by domestic overnight and international (12.9% and 9.4% increase per annum, respectively). The majority of the growth domestically has been in the short walk (under one hour) market.

Australia-wide participation trends in nature-based, coastal and aquatic and natural beauty/wildlife trends all are positive with strong growth being shown over the past 5-year period.



**Figure 9 Australia-wide visitor activity participation**

The following analysis of 'walking' in Australia is principally drawn from data in the National and International Visitor Surveys where respondents are asked to list the 'activities' they participated in when visiting a destination.

In 2017, 24.1 million trips were taken in Australia that included walking. Of these visitors, 5.3 million visitors participated in walking in Queensland. That equates to 22.1 per cent of all walking visitors to Australia visiting Queensland (slightly higher than the proportion of all Australian visitors that visit Queensland at 21.9 %).

In Queensland, the domestic day visitor segment has experienced the greatest walking participation growth (12.5% increase per annum over the past 5 years), followed by domestic overnight and international visitors (10.1% and 6.5% increases per annum respectively).

The Whitsunday region welcomed 248,730 walking visitors, equating to 4.4 per cent of all Queensland walking visitors.

As an overall destination, the Whitsunday region only attracts 0.26 per cent of the total national visitor market – whilst it accounts for 0.97 per cent of the visitor market interested in bush walking / rainforests.

International visitors (65.5%) are the largest visitor group who currently participate in walking, followed by domestic overnight visitors (33.5%).

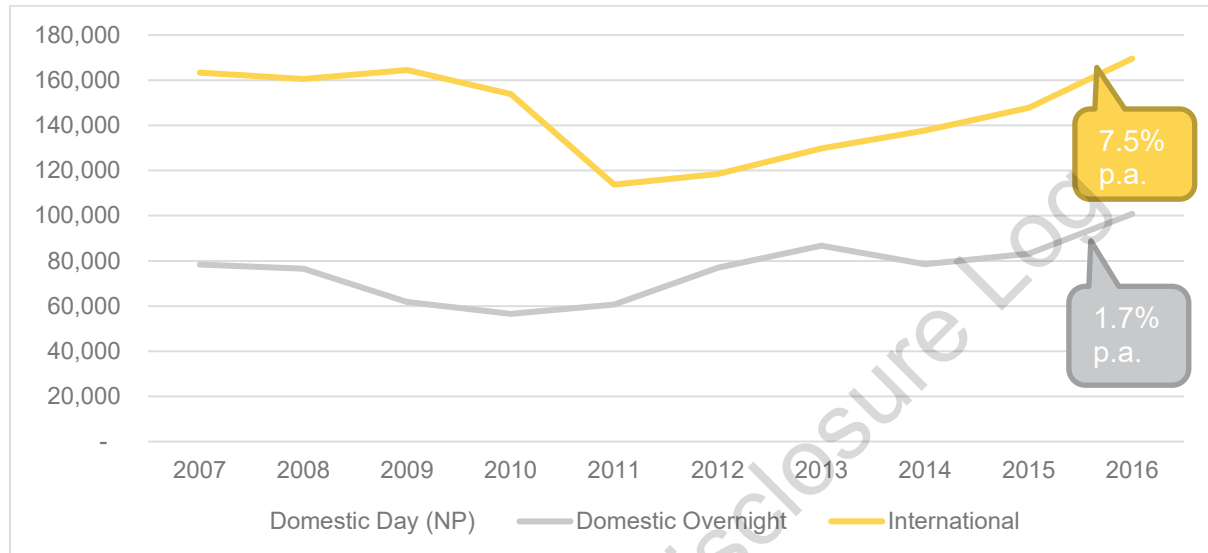


Figure 10 Trend of walking visitors to the Whitsunday region (growth rate based on 2013-2017)

### 9.2.3 Segmenting the walking market – walkers



Figure 11 Types of walkers

#### Day walkers

Day trips for walking generally ranges from 20-minute walks on Grade 3 trails up to 15 km day treks and even includes new trends such as trail running. This level of engagement is popular with almost all demographic groups, ranging from 15-85 years and all levels of fitness, interest and experience in walking. Of the different walking options, this is the favoured option of active young families.

This group need the basics from a walk:

- Clear signage and trail marking (65% do not plan or research prior to a walk)

- A graded trail to meet the widest audience
- Stopping places and interpretation
- Scenic vistas and points of interest
- Trails from 500m to 15km in a variety of grades and styles
- Return loops in preference to one-way and return trails.

### **Overnight free and independent walkers (FIW)**

These overnight walkers are typically experienced trail walkers who bring their own gear to hike a trail with groups of 2-4 walkers or independently. They range in age and experience but typically are seeking both a wilderness experience and the satisfaction of completing iconic segments of the walk. The *Younger Adults* and *Active 55+* groups sit comfortably in this user groups.

The needs of this segment include:

- Overnight stops spaced every 10-20 km (depending on gradient)
- Provision of water, toilets and designated mid or high-level camping areas
- A mix of gradients (2-5) are desirable, less graded trails preferred (sense of adventure)
- It is desirable to have common shelters and separation from large groups
- Trail options/accommodation for 1-3 nights as typically walking 1-3 nights on the trail
- Trail segments, as likely to walk the trail in sections and come back to tick off iconic segments
- Scenic vistas, remoteness, sense of escape
- Facilities for pre-post trip - those travelling 400 km+ (15%) are likely to purchase some supplies, potentially some equipment, and stay 1-2 nights at the start / end.

### **Overnight walking groups**

Similar to the free and independent walkers (significant crossover with those that walk independently and those who walk with groups), walking groups are comprised of experienced walkers who take overnight treks seeking a wilderness experience, but also enjoy that experience with others (without an organised group departure), such as bushwalking clubs or other informal walking groups. This segment is most likely to be local or regional and will bring most of their equipment and supplies. Again, *Younger Adults* (and there within *Women Travellers*) and *Active 55+* groups sit comfortably in this user group.

They need:

- Sites that cater for groups up to 12, 10-20 km apart
- A mix of gradients (2-5) are desirable, less graded trails preferred (sense of adventure)
- Trail options/accommodation for 1-3 nights as typically walking 1-3 nights on the trail, but not likely stay in region pre-post walk
- Provision of water, toilets and designated camping areas
- For this user group segment, it is desirable to have common shelters but separation from school groups, however this visitor group is comfortable to share with free and independent walkers (preferred).

### **Guided walkers**

Guided Walkers are those walking with a guide or travelling with a local tour operator as a group departure. They are likely to have travelled the furthest and spend at least twice as much per day as

FIW and walking groups. They seek a unique and 'brag-able' experience, seeking out only the best segments of the trail with iconic images and iconic 'peaks'. Having walked the best trail segments, accommodated and guided walkers are less likely to return.

Their needs include:

- Overnight stops spaced every 10-20 km (depending on gradient)
- A mix of gradients (2-5) are desirable, less graded trails preferred (sense of adventure)
- Provision of water, toilets and designated camping areas (mid or high-level hiker camps) or roofed accommodation)
- It is desirable to have common shelters and separation from large groups
- Trail options/accommodation for 1-3 nights as typically walking 1-3 nights on the trail
- The most scenic vistas, the areas creating a sense of remoteness, and sense of escape
- Facilities for pre-post trip - most likely to have travelled 400 km+ (75%) and therefore most likely to purchase supplies, equipment, and stay 1-2 nights at the start/end (depending on their itinerary).

### **Fully facilitated walkers**

This small segment of the market has the highest average spend, investing an estimated \$2,360 per trip with an average length of stay of 4 days (\$590 per day)<sup>19</sup> - four times as much as free and independent travellers and 20 per cent more per day than guided walkers. These walkers are predominately women (55%), 12 per cent are international, and 90 per cent book a night pre-post the trip in region.<sup>20</sup> As with Guided Walkers, they are likely to walk only the best trail segments and are less likely to return.

Their needs are:

- Overnight stops typically spaced every 10-20 km (depending on gradient)
- A mix of gradients (2-5) are desirable, less graded trails preferred (sense of adventure)
- Comfortable through to luxury roofed accommodation located within 1 km of the trail, separated from other users
- Trail options/accommodation for 1-3 nights as typically walking 1-3 nights on the trail plus one-night pre-post
- The most scenic vistas, the areas creating a sense of remoteness, and sense of escape
- Facilities for pre-post trip - The most likely to purchase supplies, equipment, and stay 1-2 nights at the start / end (depending on their itinerary).

In 2016 it was estimated that nearly \$250 million per annum. in 'walking money' was going offshore<sup>21</sup>.

The market segments that opt for fully guided and/or accommodated walks may be a small segment in volume, but the research suggests they spend up to 4 times as much per day as the average walking traveller.<sup>22</sup> Across these user groups, there are four markets particularly drawn to nature and soft-adventure based experiences, in particular:

- Women Travellers

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<sup>19</sup> Market review of current iconic trails with a 3-5-day length with quality accommodation options

<sup>20</sup> Commercially confidential discussions with industry specialists

<sup>21</sup> Financial Review, 2016

<sup>22</sup> Market review of current iconic trails with a 3-5-day length with quality accommodation options



- Active 55+
- Young Adults
- Active Families.

## 9.2.4 Segmenting the walking market – lifestyle segments

Market segments are developed around the attitudes and motivations of visitors to the region as opposed to the demographics and trip preferences.

### International experience seekers

Tourism Australia has defined its international target market as the 'Experience Seeker' who are globe trotters looking for authentic interactions, 'brag-able' locations off the beaten track and to immerse themselves in local culture. Experience Seekers are Australia's highest yielding market and are more likely to increase their length of stay and average spend in comparison to others. A sub-section of this target segment are individuals who seek out experiences to learn about Australia's Indigenous people, our distinctive and unique flora and fauna and specifically seek out nature-based experiences. These individuals are a particular focus for the Whitsunday Island Trail, especially since they already account for 65.5 per cent of the visitor market.

### Domestic lifestyle visitors

According to an in-depth report on the attitudes and behaviours of visitors to NSW national parks, there are four distinct market segments of domestic park visitors. While this visitor research is based on activity in NSW parks, it offers useful insights on national parks visitors as a whole.

- **Socialisers** – Down-to-earth individuals who are driven by a personal need to belong, as they thrive on sensed affection and community. Supportive and nurturing by nature, they gravitate towards being part of a wider group, such as spending time with family, or attending sports events. Outings are usually done on a budget though, with the focus on the social interactions rather than the surroundings. Parks offer a sense of belonging to nature and offer a venue for creating memories.
- **Escapers** – Individuals who long for harmony and simplicity from their interaction with nature. They want to enrich their mind, body and soul, seeing a nature escape as an antidote to busy city life. Slightly introverted by nature, they prefer engaging with outdoor arts, music and cultural events over larger sporting events or group tours. Being healthy is important to them, and they will seek experiences that provide them with a sense of balance and wellness. They look to nature to provide a venue to slow down and put life in context. They make up 25 per cent of the national park visitor population (4.1 million people).
- **Adventurers** – Individuals who are continually exploring new boundaries. Extroverted by nature, they love the freedom, fun and excitement that soft adventure offers them. They enjoy exercising and are the most likely to bring friends and family to national parks. They have a large appreciation for nature and cherish the opportunity to escape technology by visiting natural places, including opportunities to stay overnight in special locations. They make up 19 per cent of the national park visitor population (3.1 million people).
- **Explorers** – Individuals who like standing on their own feet, with a passion for exploration and discovery of new things, for purpose and true meaning. Although slightly traditional in their beliefs, they are ambitious and curious - driven by the search for wisdom and knowledge. They want to be enticed by a variety of activities and activity levels and want to hear about the story of their surroundings and histories. They enjoy engaging in cultural experiences (including aboriginal culture) but prefer small groups over larger arts, music and cultural festivals. They make up 31 per cent of the national park visitor population (5.2 million people).

## 9.3 Premium walking products and experiences in the marketplace

Walking as a tourism activity continues to grow, with performance in the luxury fully facilitated walks segment showing exceptionally strong continued performance - due to the limited capacity, many of the 'Great Walks' operate at or near 100 per cent capacity, especially in peak periods. New luxury products are being developed or are in the pipeline across a number of states, however, the Whitsunday region's ability to offer a tropical island luxury proposition gives it a strong set of unique selling points, providing it with an attractive market position. The ability to offer a unique experience will be key as the market continues to grow - the Whitsunday region's existing experience mix provides the opportunity to offer a range of variations on fly-sail-walk-relax packages.

### 9.3.1 Market investment in premium walking experiences

While relatively small in size, the fully facilitated walk market segment is being targeted with new walking experiences in iconic and scenic locations in every state and territory, and increasingly from international destinations. In addition to Queensland's plans for the introduction of five new signature walks, the Tasmanian Government is introducing a sixth new premium walk in the state, and the New South Wales Government has committed to bringing forward nine new major trail experiences (two of which are understood to be positioned as Great Walks options).

Market research into this growing segment shows it includes visitors whose main interests include physical activity in a natural environment, without foregoing the creature comforts of home, and having authentic experiences with a sense of achievement.

While guided & accommodated overnight walking visitors are a low volume segment (0.5% of all walking visitors to Australia, representing approximately 116,565 visitors), importantly they are a high yielding market. This combination of low volume and high yield achieves a strong alignment with the existing luxury market in the region and the sensitive national park environment on Whitsunday Island.

Based on qualitative research<sup>23</sup>, it is estimated that around 200,000 Australians currently participate in high end extended or multi-night walks, whilst only 40,000 do these walks within Australia. Experience from other 'signature' trails suggests that approximately 500 -1000 visitors per annum take part in the individual great or signature walks on a fully facilitated perspective.

### 9.3.2 Analysis of current great walk trail experiences

The Great Walks of Australia are positioned as offering a unique collection of independently owned, guided, multiday walks designed to actively immerse visitors in Australia's most iconic landscapes. Many of the walks are promoted as rites of passage - pilgrimages for travellers which offer the opportunity to explore, on foot, some of Australia's most spectacular landscapes. Tasmania currently dominates the Great Walks offering, with Spicers Scenic Rim Trail being the only Queensland experience.

An analysis of key features and attributes of the current twelve Great Walks is provided further below, however, key issues to consider include:

#### Location

There are currently twelve registered Great Walks of Australia. Most of the Walks are in the Southern States. Tasmania has five Greats Walks, and the Northern Territory and Queensland have only one each. The more temperate climate in southern states, in part, explains the bulk of provision initially

<sup>23</sup> Commercially confidential discussions with industry specialists

being situated in these locations. Tasmania in particular has a long-established culture of overnight wilderness walking, and benefits from the drive and advocacy provided by a number of leading ecotourism operators.

### Price

The average price point for a Great Walk experience is \$2,500 with the most expensive experience costing \$3,766 on Lord Howe Island. The price includes all accommodation, food and beverage, access to trails and expert guide information.

### Trip length

The most common length of the Great Walks is four days and three nights.

### Party size

The average size of a walking group is 10 people, with the Larapinta Trail allowing a maximum of 16 people.

### Accommodation offering

Accommodation along the twelve Great Walks follows themes that balance luxury and exclusivity. Some walks have only one accommodation option whilst others have up to three accommodation types. For instance, on longer trips such as the 6-day Larapinta Trail, the first four nights' accommodation is outdoor camping, followed by a final night in a luxurious lodge.

### Trail exclusivity

Given the national park locations, almost all of the Great Walks can be conducted by the public without needing to pay for the 'Great Walk' experience. However, in reality, these trails are often in remote locations with minimal alternative accommodation available for the general public. Accommodation for the Great Walks is exclusive to Great Walks participants, with locations being a mix of on-trail and near/off trail dependent on circumstance.

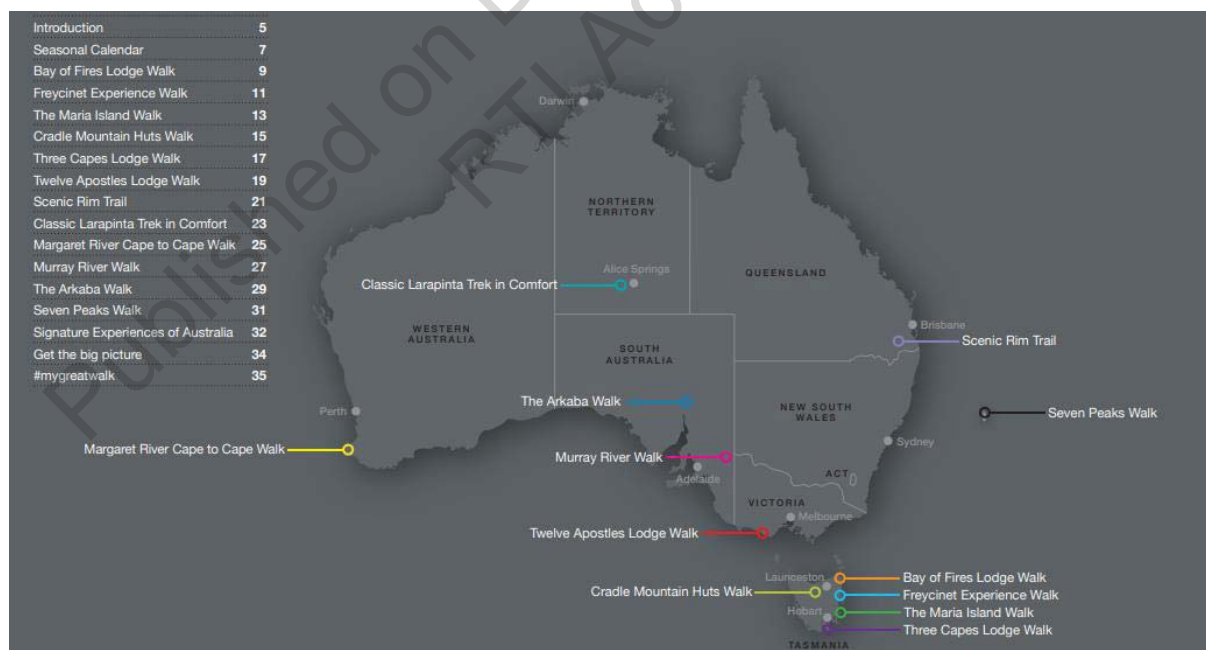


Figure 12 Location of Great Walks

The following table provides a summary of all Great Walk of Australia offerings.

**Table 25 Summary of Great Walk of Australia offerings currently in market**

Name	Trail exclusivity	Nearby accommodation options outside the exclusive trail
<b>The Arkaba Walk</b>	The first day travellers explore Wilpena Sound which has public access. Arkaba's private conservancy is the next stop for the first sleep which has public access for other activities such as overnight visits and tours of the conservancy. The last night is at Arkaba homestead which can also be booked by the public.	
<b>Murray River Walk</b>	The daily walking routes are on private property and conservancy areas with exclusive access for Murray River Walk guests only. Accommodation is an exclusive houseboat (5 rooms).	A wide range of hotels/ caravan parks 12 km from the start of the walk.
<b>Bay of Fires Lodge Walk</b>	Identified accommodation is exclusive to trail participants.  Public access to the National Park is available.	The Bay of Fires Lodge and the Forester Beach Camp are both exclusive to trail walkers. Public accommodation options include a campground within Mt William National Park for public access, and a shack within the Bay of Fires Conservation area.
<b>Cradle Mountain Huts Walk</b>	Public access to Lake St Claire National Park but the identified Great Walk accommodation is exclusive.	The public can stay at a variety of accommodation options before departing from Cradle Mountain. The next stop is Lake St Clair. There are two accommodation options for public usage with another two accommodation options located towards the final stop of the Overland track.
<b>Freycinet experience walk</b>	Accommodation is on private property, but trails can be accessed by public due to National Park status	There is a wide range of accommodation options at Coles Bay near the start of the walk. There are 3 basic campsites in Freycinet Peninsula. No shower facilities are available.
<b>The Maria Island Walk</b>	Public access to Maria Island National Park	There are basic camping grounds for public use as well as a convict probation station which can be hired for large groups of up to 6 per room. The facilities are basic with no electricity.
<b>Three Capes Lodge Walk</b>	Accommodation for the Great Walk is via exclusive private lodges	The Three Capes Track can be walked for \$495 per adult which includes 3 nights in 3 lodges along the track. Overnight stops are within environmentally sensitive cabins (Government-operated).
<b>Scenic Rim Trail</b>	Large portions of private land, including Spicers Peak Station, a 2,800-hectare nature reserve	The Spicers Retreat can be booked independently if a formal walk is not booked.
<b>Twelve Apostles Lodge Walk</b>	Privately owned and operated hiking lodge located at Johanna Beach	Plenty of accommodation for public to rent for their walk.
<b>Margaret River Cape to Cape Walk</b>	Guests stay at an exclusive beachfront property, Injidup Spa Retreat.	Injidup Retreat is also available for booking from public. There is also camping grounds along the trail making it possible for people to conduct the walk without taking the 'great walk'.

Name	Trail exclusivity	Nearby accommodation options outside the exclusive trail
<b>Classic Larapinta Trek in Comfort</b>	Exclusive, semi-permanent wilderness campsites: Nick Murcutt's Camp near Simpsons Gap, Charlie's Camp near Serpentine Chalet and Camp Fearless nestled under Mt Sonder.	There are camping grounds along the Trail, but the three identified campsites are exclusive to the Great Walk experience.
<b>Seven Peaks Walk</b>	Accommodation is in Pinetrees Lodge which accommodates for trail guests and regular tourists (up to 75 guests)	

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**Table 26 Summary of Great Walk of Australia offerings currently in market**

Name	Location	What is special	Trip length	Grade	Seasonality	Trail exclusivity	Price	Accommodation type	Group Size	Location weather
<b>The Arkaba Walk</b>	South Australia	a journey of 600-million years of geological history, which echo through the stratified layers of Wilpena Pound and the Elder Range, providing spectacular backdrops throughout the walk	4 days/3 nights	Moderate to hard	March to October	60,000-acre private wildlife conservancy	\$2,200	2 x swag camping and 1 night in Homestead.	max 10	Minimum 5 max 30
<b>Murray River Walk</b>	South Australia	Encounter diverse wildlife and waterbirds along the Murray River, creeks and old oxbow lagoons that meander through ancient red gum forests dwarfed by spectacular red ochre coloured cliffs.	4 days/3 nights	Easy	May to September	The daily walking routes are on private property and conservancy areas with exclusive access for Murray River Walk guests only.	\$2,300	3 nights on a houseboat along the Murray River	max 10	Minimum 5 max 25
<b>Bay of Fires Lodge Walk</b>	Tasmania	At the edge of Mt William National Park in north-eastern Tasmania, the magnificent coastline known as the Bay of Fires provides dramatic landscapes, ecology, and wildlife.	4 days/3 nights	Moderate	October to May	Area is a National Park, therefore allowing public access.	\$2,420	1x night at Forester Beach Camp  2x night in Bay of Fires Lodge	max 10	min 9 max 21

Name	Location	What is special	Trip length	Grade	Seasonality	Trail exclusivity	Price	Accommodation type	Group Size	Location weather
<b>Cradle Mountain Huts Walk</b>	Tasmania	Discover one of Australia's most spectacular World Heritage Areas while hiking the world-famous Overland Track in the peaceful and exquisite terrain of Cradle Mountain and Lake St Clair National Park, Tasmania.	6 days/5 nights	Moderate to hard	October to May	Public access allowed as it is Lake St Clair National Park	\$3,380	6 x nights at Cradle Mountain Huts	max 12	min 0 max 15
<b>Freycinet experience walk</b>	Tasmania	The Freycinet Experience is the original guided walk on Tasmania's east coast, taking you through the pink granite Hazard Mountains and rich coastal forests, and the purest of white-sand beaches including the world-renowned Wineglass Bay.	4 days/3 nights	Moderate	October-April	Accommodation is on private property, but trails can be accessed by public.	\$2,450	3x nights at Friendly Beaches Lodge	max 10	min 6 max 21

Name	Location	What is special	Trip length	Grade	Seasonality	Trail exclusivity	Price	Accommodation type	Group Size	Location weather
<b>The Maria Island Walk</b>	Tasmania	Maria Island is a delightful blend of rare wildlife, convict heritage, and elegant accommodation. On the multi-award-winning Maria Island Walk, you'll enjoy gentle walking by day and candlelit gourmet dining at night.	4 days/3 nights	Easy to Moderate	October to April	Access is allowed into Maria Island National Park	\$2,500	2x nights in wilderness camp  1x night in UNESCO listed heritage house	max 10	min 9 max 21
<b>Three Capes Lodge Walk</b>	Tasmania	The Three Capes Lodge Walk is a fully-guided walking experience along Tasmania's dramatic Tasman Peninsula with the wild Southern Ocean as your constant.	4 days/3 nights	Moderate	Year Round	Accommodation is private but	\$2,790	1 x crescent lodge  1 x Munro Lodge	max 14	min 4 max 24
<b>Scenic Rim Trail</b>	Queensland	This truly unique adventure starts in the foothills of South East Queensland's Main Range National Park, an area famous for its stunning collection of mountains, ridges, escarpments, forests and ancient volcanic plateaus.	3 days/ 3 nights	Moderate to hard	March to November	Large portions of private land, including Spicers Peak Station, a 2,800-hectare nature reserve	\$2,190	safari-style camping tents at Spicers Peak Station for 3 nights	max 10	min 9 to max 29



Name	Location	What is special	Trip length	Grade	Seasonality	Trail exclusivity	Price	Accommodation type	Group Size	Location weather
<b>Twelve Apostles Lodge Walk</b>	Victoria	Explore the Great Ocean Road coastline on the Twelve Apostles Lodge Walk. This lodge-based walk over four days is an incredible way to see the shipwreck coastline and the hidden areas of this iconic landscape on foot.	4 days/3 nights	Moderate	September to May	privately owned and operated hiking lodge located at Johanna Beach	\$2,285	3 x nights at hiking lodge	max 10	min 8 max 22
<b>Margaret River Cape to Cape Walk</b>	Western Australia	Experience the Margaret River at its finest; enjoy world-class food and wine, stay in beachfront luxury and discover the turquoise ocean, white beaches, coastal cliffs and towering karri forest on the Cape to Cape Track with Walk into Luxury.	4 days/3 nights	Moderate	March to June & Sep-Nov	guests currently stay at exclusive beachfront property, Injidup Spa Retreat, for the duration of the walk	\$2,690	3 x nights at Injidup Spa Retreat	max 12	min 9 max 25
<b>Classic Larapinta Trek in Comfort</b>	Northern Territory	Soak up the ethereal scenery of vast flood plains, razorback rocky outcrops, walking the high ridgelines of the West MacDonnell Ranges, led by guides at Australian Walking Holidays.	6 days/5 nights	Moderate to hard	April to September	exclusive, semi-permanent wilderness campsites: Nick Murcutt's Camp near Simpsons Gap, Charlie's Camp near Serpentine Chalet and Camp Fearless nestled under Mt Sonder.	\$2,695		max 16	min 4 max 28

Name	Location	What is special	Trip length	Grade	Seasonality	Trail exclusivity	Price	Accommodation type	Group Size	Location weather
<b>Seven Peaks Walk</b>	NSW	The Seven Peaks Walk is a stunning experience based out of Pine Trees Lodge on Lord Howe Island. This 6-night, 5-day guided walk encompasses up to 45km of walking, graded moderate to hard, with options depending on ability and weather conditions. It's a truly spectacular way to explore a UNESCO World Heritage listed island	5 days/ 6 nights	Moderate to hard	April and May & September to November	Accommodation is in Pine Trees Lodge which accommodates for trail guests and regular tourists (up to 75 guests)	\$3,766 (excluding flights)	6 x nights at Pine Trees Lodge	Max 12	min 14 max 22

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## 9.4 Trends in eco and nature-based accommodation

There has been sustained strong demand for appropriately located eco-accommodation in the Australian marketplace for a number of years. While a range of accommodation types are common place, consumer uptake has been very much driven by glamping products and experiences which range from the classic bell tent to builds on concrete pads of stilts/short piles, and more innovative styles such as transparent 'bubble tents'.

There has also been a boom in modular designs, many of which can be best described as semi-permanent or demountable. Designs often have Scandinavian minimalist markers, with "getting away from it all/getting back to nature" at the heart of their selling propositions.

### 9.4.1 Definitions

**Rural tourism** involves visiting rural areas with a focus on actively participating in or learning about a rural lifestyle. While there is no single definition of what rural tourism comprises, contemporary rural tourism activities are frequently positioned around providing unique opportunities to 'connect' with the personality of a destination through country pubs, boutique accommodation and retail facilities, farms or wineries. At its most basic, 'rural tourism' is tourism activity taking place in rural areas. Not all rural tourism activity is necessarily sustainable, nor can it automatically be defined as ecotourism.

**Nature-based tourism** can be defined as sustainable tourism activity or experience that relates to the natural environment, whether for relaxation, discovery or adventure. Nature-based tourism can include a range of activities including cycling, water-based activities, bushwalking, fishing, visiting botanical or other public gardens, state and national parks and other outdoor and adventure activities. Visits to National Parks, wildlife viewing, and water activities are the most common forms of nature-based tourism undertaken by visitors in Queensland.

**Ecotourism** is a niche segment within the broader category of nature-based and sustainable tourism. The ecotourism segment of consumers and experiences are those that seek to enhance a nature-based experience with both sustainable operating practices and engaging interpretation of the natural and cultural landscape. This educational element, mixed with sustainable practices, is what separates ecotourism from nature-based and mainstream sustainable tourism. It engages and informs visitors and is managed to be ecologically, economically and socially sustainable by contributing to the wellbeing of the natural areas and local communities where they operate.

In relation to accommodation, Ecotourism Australia defines ecotourism as 'ecologically sustainable tourism with a primary focus on experiencing natural' i.e. the accommodation has a clear and firm relationship with its surroundings.

### 9.4.2 Preferred accommodation types for the Whitsunday Island Trail

A combination of glamping and light frame hut or cabin construction types would seem the most appropriate options given the Whitsunday Island Trail topography, weather conditions, development, and fit with market expectations. In this instance, hotel or lodge propositions are not in keeping with the sensitive environment, market size or market demand/expectation, and should not be considered as viable options.

Looking at glamping and light frame constructions in further depth, the following provide examples of the style of accommodation which may be appropriate for the Whitsunday Island Trail. In reality, the lines between the styles of accommodation are easily blurred, with marketing and positioning often being the determinant in how the experience is defined.

Images of these accommodation styles are contained in Appendix H.

- **Glamping:** Luxury camping or glamping products have led growth in eco-accommodation developing, commencing with traditional bell tent/ tepee structures but now encompassing a broader range of styles and builds. Common characteristics include:
  - Low environmental impact

- Relatively quick construction and installation
  - Semi-permanent construction but can be demountable depending on style.
- **Character accommodation:** Character accommodation is a variation on a theme, based on unique styles of accommodation, often heritage-based
  - **Light-frame construction/ demountable construction:** Glamping designs have gradually evolved into light-frame constructions, the design of which can be best described as semi-permanent. These can modular structures which are relatively easy to transport between sites. Build materials vary, including canvas, wood or steel-frame builds.
  - **New trends:** floating accommodation.

## 9.5 The Whitsunday region visitor market

### 9.5.1 Visitor trends

Approximately 940,000 visitors visited the Whitsunday region during 2017 – with 696,000 of these visiting Whitsunday Island itself.

Visitation to the region has grown by 5.5 per cent over the past five years, with visitors spending approximately 2.9 m visitor nights in the Whitsunday region during 2017.

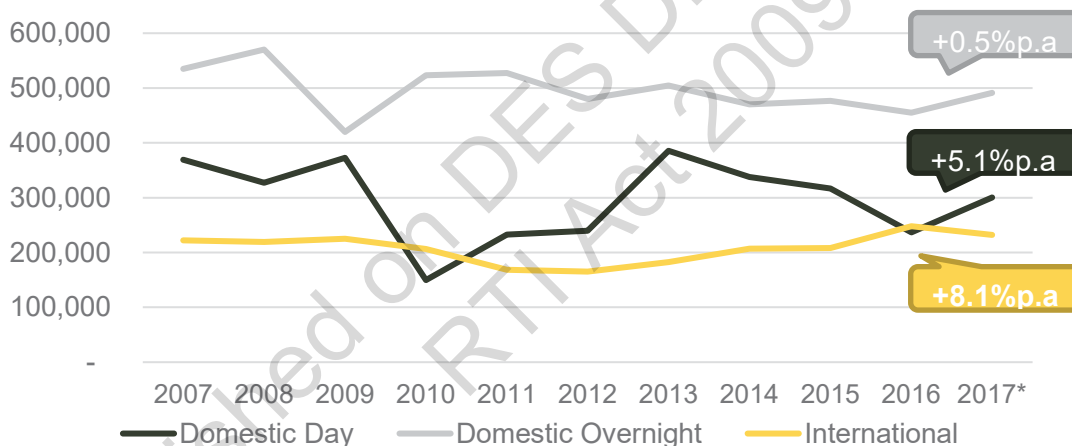


Figure 13 shows varying levels of performance across key markets, with domestic overnight trips flatlining, day visit volumes rising by 5 per cent and international visits rising by approximately 8 per cent<sup>24</sup>.

Overall, Queensland's visitor economy has continued to experience steady growth, with state-wide domestic tourism growth of 6 per cent for the year ending March 2018 exceeding national growth averages. However, Queensland has lost market share to other states over this ten-year period, despite expenditure and trip volume growth. There are a range of reasons for this relative underperformance, however, one factor attributed is the need to compete based on new signature tourism products and experiences i.e. experiences which grow awareness and drive new visitation.

The Whitsunday region has a distinct visitor profile, with approximately 31 per cent of the visitors to the region being day visitors<sup>25</sup>. The majority of the visitors to the region are from the domestic overnight segment (48%, 454,000 visitors during 2017) whilst the remaining 21 per cent are international visitors staying in-region (247,980 visitors during 2017).

<sup>24</sup> Unless otherwise specified, all market data referred to in this report is sourced from Tourism Research Australia's international and national visitor surveys, with data collected relating to the year ending March 2018

<sup>25</sup> 3-year averages used to provide robust sample (2015-2017)

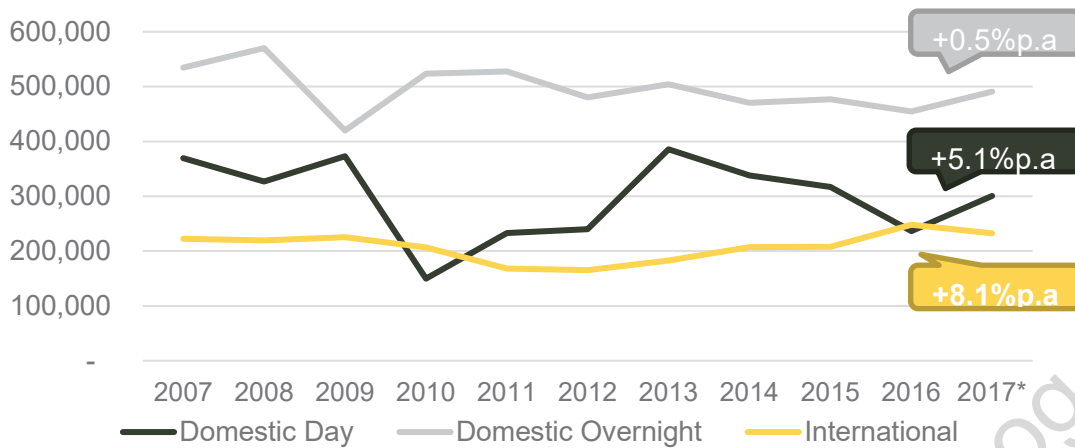


Figure 13 Whitsunday region visitation trends 2007-2017

### 9.5.2 Purpose of travel

The Whitsunday region is dominated by holiday travel, with 63 per cent of visitors having holiday as their primary purpose of travel, a significant higher proportion than Queensland as a whole.

Table 27 Whitsunday region – primary purpose of travel

Purpose of Travel	Whitsunday Island visitors	Market Share	Whitsundays region visitors	Market share	Queensland visitors	Market share
Holiday	577,510	75.0%	712,746	63%	30,213,050	46.4%
Visiting friends and relatives	99,422	12.9%	144,093	13%	18,917,605	29.0%
Business	82,421	10.7%	191,979	17%	9,247,385	14.2%

### 9.5.3 Seasonality in visitation

Seasonality and extreme weather events are as expected of a destination located in the tropics. Visitation to the Whitsunday region is strongly seasonal, with peaks in September and October.

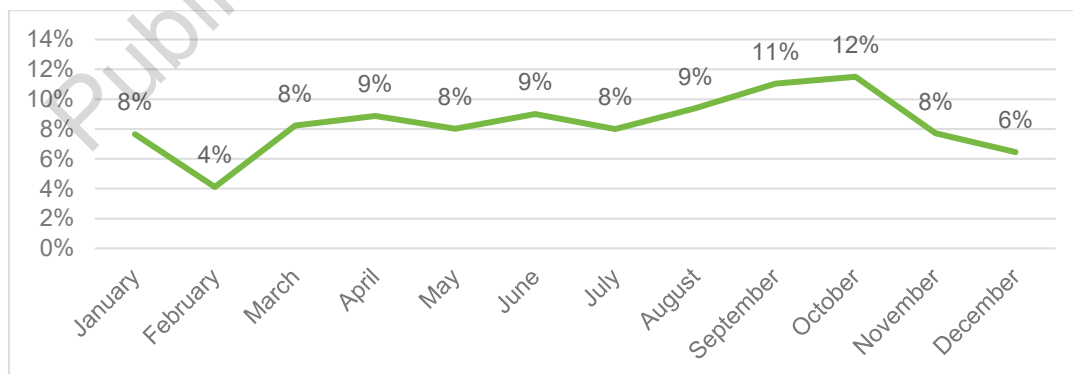
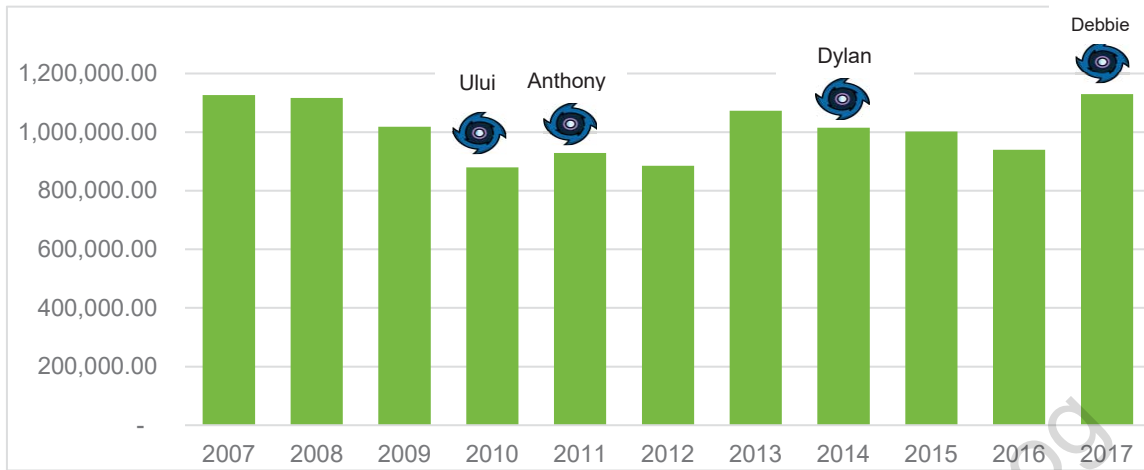


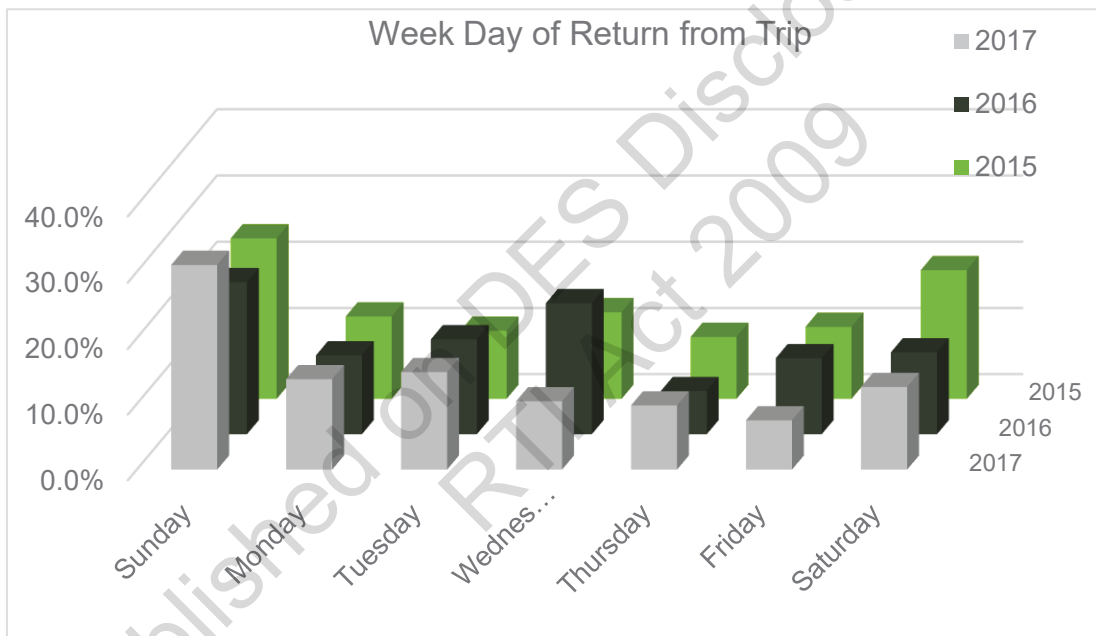
Figure 14 Whitsunday region seasonality (2015-2017 average), based on the month of visitors return trips

As noted below, the Whitsunday region has experienced cyclone activity on a regular basis over the last decade. Trading patterns have usually experienced a dip in the following year, reflecting reduced visitor confidence and negative publicity.



**Figure 15 Whitsunday region seasonality (2015-2017), based on the month of visitors return trips**

Analysis of Tourism Research Australia data also shows a clear preference for visitors completing their trips on weekends. This trend is common in destinations which are dominated by holidays as the primary purpose of visits, reflecting the importance of short breaks and traditional longer holiday trips.



**Figure 16 Whitsunday region visitation – day of return trip**

### 9.5.4 Average length of stay

The average length of stay (ALOS) of domestic overnight visitors to the Whitsunday region is 4.6 nights (up 0.6% per annum since 2013<sup>26</sup>). The domestic Whitsunday region's ALOS is currently above the ALOS for the State, at 4.0 nights. This trend may be attributable in part, to the region's relative geography, with the data suggesting the domestic overnight ALOS to the Whitsunday region is dissimilar to short breaks taken elsewhere, with its island location and tourism offerings positioning it more as a tourism destination than a local travel opportunity.

The average length of stay of international visitors to the Whitsunday region nights is 5.2 nights.

<sup>26</sup> Year Ending September, Tourism Research Australia

### 9.5.5 Origin of visitors

The largest domestic markets for the region are Queensland (79.4%) and Victoria (5.2%), whilst the largest international markets are the United Kingdom (21.9%), Germany (15.0%) and China (9.3%).

Whilst the United Kingdom market has grown at a steady 4.6 per cent per annum. over the past five years and the German market has averaged 11.6 per cent growth per annum - the Chinese market has doubled (on average) every year, over the past five years.

### 9.5.6 Visitor demographics

The largest visitor segment to the Whitsunday region is currently 'Generation X' (35 to 54-year olds), followed by 'millennials' (20 to 35-year olds) and 'baby boomers' (54 to 72-year olds, 24.8%). Of these segments, millennials are currently the fastest growing age group, with a 7.7 per cent increase per annum over the past five years. The largest singular age groups were 30-34yr (12.2%), and 40-44yr (10.7%).

Amongst international visitors to the region, the number of visitors who visit the region as part of a couple (married, de facto or living together) has grown by approximately 14.1 per cent per annum over the past five years, but still only accounts for 44.6 per cent of all international traveller. The remaining 55.4 per cent of international travellers to the Whitsunday region were single – within whom 28.2 per cent were under 35years and living with their parents/guardians.

There are significant differences in visitor genders between domestic and international travellers – with 55.5 per cent of domestic travellers being male, but inversely only 43.8 per cent of international travellers. This averages out at 53.0 per cent male visitors, and 47.0 per cent female visitors. This is particularly prevalent when looking at travel parties for international visitors, with two out of every three unaccompanied travellers (who account for 45.5% of all international visitors) being female. Only 38.7 per cent of unaccompanied travellers are male.

Similarly, 65.3 per cent of people who travel with friends or relatives are female, and 58.7 per cent of people who travel in family groups (parents + children) are female. Whilst male travellers were the most prevalent gender represented domestically (55.5%<sup>27</sup>), this has fluctuated largely over the past five years.

### 9.5.7 Visitor activities

When looking at visitor activities undertaken during trips, nature-based tourism (broadly) in the region has grown at 4.8 per cent per annum since 2012. Most other activity groups such as aquatic and coastal activities or food and wine activities grew at an average of 5.9 per cent per annum during this 5-year period, so nature-based activities are relatively underrepresented in terms of market growth.

**Table 28 Whitsunday region visitors – activity segment participation**

Activity group analysis – Whitsunday region	Visitors	Market Share	5yr Trend	Participation
Aquatic and Coastal Activities	687,817.69	23%	6.4%	60.9%
Food and Wine Activities	292,617.74	10%	5.4%	25.9%
City Based Activities	999,826.90	33%	8.6%	88.5%
Sport and Adventure Activities	285,419.38	9%	-0.4%	25.3%
History and Cultural Activities	221,959.09	7%	5.6%	19.6%
Natural Beauty Activities	368,162.29	12%	4.6%	32.6%
Wildlife Activities	160,004.87	5%	4.6%	14.2%

<sup>27</sup> 3-year average (2015-2017)

Participation in nature-based activities in the Whitsunday region is high, with approximately 41% of all visitors to the region taking part, compared to the state average of 18.8 per cent. Bushwalking as a specific visitor activity was taken up by almost 250,000 visitors in the region and has grown by 3.4 per cent per annum over the past five years. Similarly, visitor numbers for those interested in charter boats/cruises and ferries have grown by 5.7 per cent, with 226,950 visitors taking part in these activities within the Whitsunday region during 2017.

As can be noted from Table 29, approximately 250,000 (22%) of current visitors take part in bushwalking and rainforest walks. It is important to note however, that most of this activity is informal and short distant walks rather than long distance trail walking. Table 29 Whitsunday region visitors – activity participation shows that participation in walking and nature-based activities is higher among current visitors to Whitsunday Island than the region as a whole, and significantly higher than the Queensland-wide average

**Table 29 Whitsunday region visitors – activity participation**

Individual Activity Analysis – Whitsunday region	Visitors	Market Share	5yr Trend	Participation
Visit national parks / state parks	283,293	13%	8.6%	25.1%
Visit botanical or other public gardens	192,232	9%	8.3%	17.0%
Go whale or dolphin watching	86,868	4%	2.9%	7.7%
Bushwalking / rainforest walks	248,730	11%	3.4%	22.0%
Visit the reef	228,499	10%	103.7%	20.2%
Other outdoor activities	71,200	3%	0.6%	6.3%
Scuba diving	75,604	3%	2.7%	6.7%
Snorkelling	264,053	12%	7.9%	23.4%
Experience aboriginal art / craft and cultural displays	81,013	4%	2.4%	7.2%
Visit an aboriginal site / community	52,354	2%	3.6%	4.6%
Go on guided tours or excursions	180,539	8%	7.4%	16.0%
Charter boat / cruise / ferry	226,949	10%	5.6%	20.1%
Visit a health spa / sanctuary / well-being centre	24,133	1%	7.3%	2.1%
Visit or stay on an island	217,296	10%	110.0%	19.2%

Within the Whitsunday region, activity-based tourism is exceptionally strong. These experiences represent the core reasons to visit, with 98.8 per cent of international visitors taking part in *Aquatic and Coastal* activities, 98.6 per cent of visitors taking part in broader *Outdoor / Nature Based* activities and 80.3 per cent of visitors taking part in *History and Culture* activities. The fastest international growing activity groups within the Whitsunday region are *City Based Activities* (9.1% p.a.), *Nature Based* activities (9.1% p.a.) and *Aquatic and Coastal* activities (9.0%).

This strong growth in the Whitsunday region puts the area in a prime position to further capitalise on enhanced Whitsunday region interaction activities such as the Whitsunday Island Trail.

Current tourism figures show that international visitors to Queensland who took part in walking spend on average two nights longer than general visitors to the region (19.7 vs 21.7 nights). A Whitsunday Island Trail is perfectly positioned to tap into the *Aquatic and Coastal* and broader *Nature Based* activity markets, to



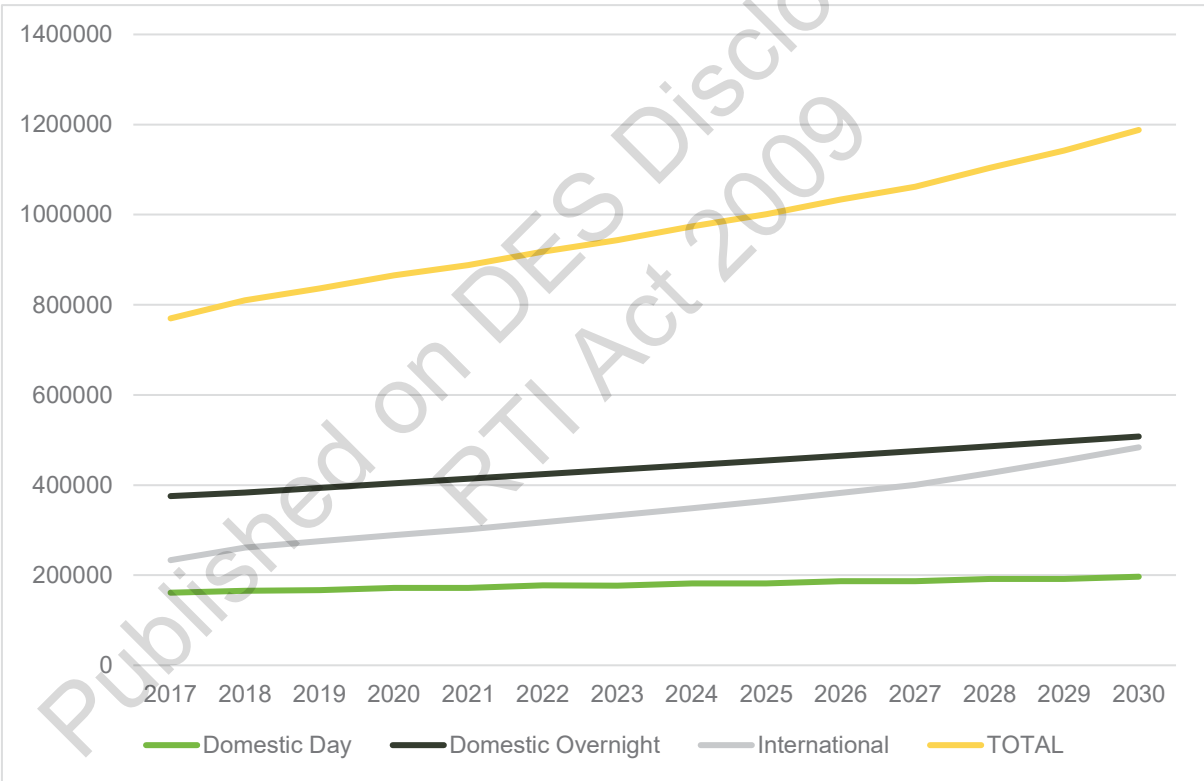
further facilitate international visitors in their bid to obtain that authentic interaction in this amazing location and engage in exploring local culture. It would inspire them to extend their length of stay through the opportunity to immerse themselves further into the region than currently possible.

### 9.5.8 Whitsunday region visitor market forecasts

Using Tourism Forecasting Panel (TFP) forecasts, data indicates that the Whitsunday region visitor market as a whole will experience strong growth – an additional 418,162 visitors forecast by 2030 (54% growth from 2017). Growth is anticipated to be strongest in domestic overnight and international sectors. This is indicated in the table and graph below.

**Table 30 Whitsunday region visitor market - forecast growth 2017-2030**

	Forecast visitor growth 2017-2030 (additional visitor numbers)	% visitor growth 2017-2030
Day Visitors	35,518	22%
Domestic Overnight Visitors	132,289	35%
International Visitors	250,355	107%
<b>Total</b>	<b>418,162</b>	<b>54%</b>



**Figure 17 Whitsunday region visitor market – forecast growth 2017-2030**

With regard to participation in bushwalking, if participation rises with the overall market, this will grow from 248,730 visitors to 467,278 in 2030. This is solely based on the broad assumption of overall market growth – additional growth could be anticipated if renown as a walking destination grows or this is investment in overall trail provision i.e. looped trails etc.

**Table 31 Whitsunday region visitor market forecast - overview**

Market Summary	Whitsundays Island		Whitsundays Region		Queensland	
	2017 Visitor Market	2030 Visitor market	2017 Visitor Market	2030 Visitor market	2017 Visitor Market	2030 Visitor market
Overall visitor Market	769,843	1,188,005	1,130,175	1,656,097	65,158,241	84,693,928
Ecotourism Visitors	408,416		459,641		12,363,455	
Bushwalking Visitors	233,692	444,805	248,730	467,278	5,320,676	7,434,859
Nature Participation	53.1%		40.7%		19.0%	
Walking Participation	30.4%	37.4%	22.0%	28.2%	8.2%	8.8%

### 9.5.9 Potential impact on existing visitor markets

Based on a proposition with luxury fully facilitated walks as its focus, a range of positive impacts on the Whitsunday region visitor market are anticipated. Table 32 provides a summary.

As the luxury fully facilitated walks is entirely new to the Whitsunday region, new visitation would predominately comprise of new overnight (domestic and international) visitors (and economic benefits) - substitution with existing trade is expected to be limited.

**Table 32 Potential Impact of the development**

Strategic impact
<ul style="list-style-type: none"> <li>■ A high-quality new experience has the potential to lift awareness and profile of the Whitsunday region as a destination.</li> <li>■ If successful in being positioned as a 'Great Walk' the trail has the potential to provide additional cachet for the Whitsunday region, complementing its luxury market positioning.</li> <li>■ The experience (trail and exclusive accommodation on route), has the potential to complement and add value to existing Whitsunday region experiences - the nature of a short exclusive fully facilitated walk experience has the potential to achieve a good fit with existing accommodation offerings and nature-based experiences in terms of pre and post trip itinerary options.</li> </ul>
Domestic overnight visitor market
<ul style="list-style-type: none"> <li>■ If it is assumed that a maximum of 48 customers per week could use the trail (two groups on the trail at once (maximum of 12 per group), two times per week) over a nine-month season, and assuming 70% of customers were domestic, this would mean 1,310 additional trips per year. If packaged with pre and post trip stay options, an average five-night overall Whitsunday region stay could generate up to 6,550 additional nights in destination.</li> <li>■ Experience from the Great Walks of Australia show that the fully facilitated walk market segment is a small one. While volumes of new domestic visitors would be relatively small, yield per capita will be high.</li> <li>■ Existing Great Walks are especially popular with female travellers, active 55+, young adults and active families – these leading demographic segments achieve a good fit with the overall domestic market in the Whitsunday region at present.</li> <li>■ In addition to attracting new visitors specifically to walk the trail, if appropriate packages are available, there will be opportunities to attract existing long holiday visitors to choose to integrate walking and staying on the trail as part of the experience.</li> <li>■ A particularly positive aspect of the proposal is the ability to complement existing Whitsunday region visitor experiences - the nature of it being an island destination, provides ready opportunities for the trail/facilitated walk to be packaged as part of a longer itinerary.</li> </ul>

#### International visitor market

- A high profile, well marketing trail in the Whitsunday region has the potential to raise the overall appeal of the Whitsunday region as a destination for international visitor markets.
- As with domestic overnight markets, there will be opportunities to attract existing long holiday visitors to choose to integrate walking and staying on the trail as part of the experience.
- Great Walks experiences are appealing to international visitor markets - if 30 per cent of capacity is taken up by international visitors, this would mean 562 additional visitors and 2,922 (average international length of stay 5.2 nights) nights in destination.

#### Day visitor market

- It is anticipated that the trail will have minimal impact on the existing day visitor market.
- Permitting and organisation/marketing of the trail should seek to minimise extensive day visitor use to preserve exclusivity for the target user group.

#### Strategic impact

- A high-quality new experience has the potential to lift awareness and profile of the Whitsunday region as a destination.
- If successful in being positioned as a 'Great Walk' the trail has the potential to provide additional cachet for the Whitsunday region, complementing its luxury market positioning
- The experience (trail and exclusive accommodation on route), has the potential to complement and add value to existing Whitsunday region experiences - the nature of a short exclusive fully facilitated walk experience has the potential to achieve a good fit with existing accommodation offerings and nature-based experiences in terms of pre and post trip itinerary options

### 9.5.10 Conclusions on the walking market – fully facilitated

- Overall, a strong case can be made for new trail development on Whitsunday Island, tapping into a number of different walking market segments. If considered alongside the Queensland Government's desire to add a new signature experience that complements the Whitsunday region market positioning, then focusing squarely on the luxury end of the market - fully facilitated guided walks, is considered to offer the greatest strategic benefits. In terms of volume, this represents a very small proportion of the market, with capacity on similar trails very limited (often less than 1500 people per year) to ensure the necessary degree of exclusivity in keeping with the premium price point. Experience from other trails in the Great Walks of Australia group demonstrates that these low volume niche experiences can play a significant role in lifting perception and awareness of a region. This being the case, a niche market segment where women travellers, 55+ age groups, active families and young adults form the bulk of the market, places the Whitsunday region well to provide an experience in line with market demand.
- The relatively short nature of the trail, limited location options for new accommodation development and the need to limit conflicts between different walking groups, reduces the appeal of shaping trail development towards day walkers and overnight walking groups in particular. Trail attributes have the potential to appeal to the guided walker and overnight free and independent walker segments, however, greatest economic benefit and most productive use of planned infrastructure will be achieved from focusing on the luxury fully facilitated segment. Additional trail infrastructure development in the future, potentially extending the trail or adding new loops are options to consider, if the trail network is to appeal to a broader range of markets.
- The nature of the proposed trail fits with the fully facilitated walker market segment's desire of a mix of gradients and a sense of 'accessible wilderness or adventure'. Scenic vistas are also essential components. While Whitsunday Island is clearly already a 'developed' destination if parts of the trail are able to offer the sense of remoteness and escape this will also fit well with sector demand traits and attributes.
- The nature of the Whitsunday region hospitality and tourism options provides an ideal fit in terms of packaging the trail with other luxury and nature-based experience options - the market has a strong propensity to take up pre and post trail nights, making it an ideal fit for the Whitsunday region complementary accommodation and experience offerings.

### 9.5.11 Conclusions on the Whitsunday region visitor market in relation to a new premium walking proposition

While it is not appropriate to draw conclusions regarding the feasibility of the new walking trail opportunity based solely on the existing Whitsunday region visitor market, it is possible to identify a number of influencing factors and trends:

- Overall, the Whitsunday region visitor market is conducive to a new premium walking trail of the type proposed – motivating factors for existing visitors including luxury accommodation and exclusive experiences located in a high quality sub-tropical environment achieve a close strategic fit with a premium walk proposition
- A premium walking proposition will deliver a range of synergies with existing products and experiences. Sailing, beach, wildlife and nature-based experiences as well as broader health and wellbeing/ mindfulness experiences offer the opportunities for a range of connected itineraries and potential packages
- Overall capacity for a new luxury facilitated walking proposition is small. Assuming max group size of 12 and 4 groups per week using the trail over a 39-week season, 100% utilisation would generate 1,872 new visitors. However, if packages entice visitors to undertake pre and post trail stays, an average stay of 5 nights is deliverable – this would mean up to 9,360 nights in destination (a max of 3,744 of which would be on trail – two nights). If an average yield of \$600 per visitor night is achieved, a total direct visitor expenditure of \$5,616,000 could be generated.
- A trail of the type proposed has strong potential to attract new visitation to the destination. If packages are available, the experience will also appeal to existing overnight visitors, providing an additional option as part of a longer multi-accommodation holiday trip.
- The Whitsunday region has a strong season visitor market - participation in the walking trail would be expected to echo this pattern, with extremes of temperature and conditions limiting visitation, particularly during cyclone season. While this trading pattern does impact on investment decisions and return on investment calculations, most of Australia's Great Walks products are also located in seasonal destinations where trails are closed for periods of the year – seasonal trading does not hinder overall feasibility to a significant extent, however it is factor to consider in terms of investor intent.
- The Whitsunday region visitor market as a whole has been comparatively flat compared to a number of other Queensland regions over the past five-year period, with cyclone activity acting as one of the depressing factors on demand. A high-profile new product/experience of the type proposed provides an opportunity to raise destination profile and generate new visitation - in essence, new supply tapping into a health niche luxury walking sector.
- The existing visitor market has very strong participation levels in nature-based, walking, coastal, and aquatic activities, inferring interest in the type of trail product being proposed. While the trail is not aimed at day walkers (the intent being a new overnight walking experience), strong levels of interest in walking and nature-based experiences are positive from the perspective of offering the option of packaging a trail experience with pre and post trip extensions elsewhere in the destination.

### 9.5.12 Conclusions on the walking market – fully facilitated walks

- Overall, a case can be made for new trail development in the Whitsunday region tapping into a number of the different walking market segments, however if considered alongside the Queensland Government's desire to add a new signature experience, then it is necessary to focus squarely on the luxury end of the market - fully facilitated guided walks. In terms of volume, this represents a very small proportion of the market, with capacity on similar trails very limited (often less than 1000 people per year) to ensure the necessary degree of exclusivity in keeping with the premium price point. Experience from other trails in the Great Walks of Australia set, demonstrate that these low volume niche experiences can play a significant role in lifting perception and awareness of a region.
- This being the case, a niche market segment where women travellers, 55+ age groups, active families and young adults form the bulk of the market, places the Whitsunday region well to provide an experience in line with market demand.

- The nature of the proposed trail fits with the fully facilitated walker market segment's desire for a mix of gradients and a sense of 'accessible wilderness or adventure' – scenic vistas are treated as essential. While Whitsunday Island is clearly already on tourists' radars due to the popularity of Whitehaven Beach and Hill Inlet, if parts of the trail are able to offer the sense of remoteness and escape this will align with sector demand traits and attributes.
- Whitsunday region existing hospitality and tourism options provide an ideal fit in terms of packaging the trail with other luxury and nature-based experience options - the market has a strong propensity to take up pre and post trail nights, making it an ideal fit for the Whitsunday region's complementary accommodation offerings.

### 9.5.13 Conclusions on the Whitsunday Island Trail as a Great Walk proposition

- Acceptance as a formal 'Great Walk' is wholly at the discretion of the Great Walks of Australia consortium, however the Whitsunday Island Trail's ability to offer an experience which is largely unmet by the current twelve Great Walks alongside high market recognition of Whitehaven Beach, positions it well as an interesting investment opportunity and addition to their service offering. Only Lord Howe (being an island) currently offers a similar experience.
- While guided & accommodated overnight walking visitors are a low volume segment (0.5% of all walking visitors to Australia<sup>28</sup>, representing approximately 116,565 visitors), importantly they are a high yielding market. This combination of low volume and high yield achieves a strong alignment with the existing luxury market in the region and the sensitive National Park environment on Whitsunday Island.
- While the majority of the Great Walks are 3-night/4-day experiences, this should not be a major deterrent for the Whitsunday Island Trail. The shorter trail suits the Whitsunday region tropical climate, and the destination's ability to bookend the shorter trail with other accommodation and leisure experiences is in keeping with overall demand. The shorter length of the Whitsunday Island Trail will require careful route planning to provide the necessary scenic vistas and sense of remoteness.
- The wide range of existing luxury accommodation and experience providers on the Whitsunday region opens up a wide range of partnering opportunities which should be appealing to prospective investors, adding to the uniqueness of the Whitsunday Island Trail proposition.
- Accommodation provisions need to balance seclusion, uniqueness and luxury – patrons paying a premium demand both of these attributes. Different types of accommodation along the route provide a means of diversifying the offering, providing for the 'getting back to nature' feel as well as creature comforts.
- For fully facilitated walks, small group size is essential. The norm for the current Great Walks is a group size of approximately 10-12. The Whitsunday Island Trail would need to reflect this level of seclusion and uniqueness - price points/unit cost per person per day will by necessity have to be high (\$600+ per day).
- Many of the Great Walks are in national parks where access (free or paid entry) is possible. On a number of trails, alternative accommodation provision is available outside the exclusive Great Walk facility, however, in general terms alternative options are reasonably limited. Given existing camping accommodation on Whitsunday Island, and in order to retain the seclusion and uniqueness, it is recommended that no further accommodation options (outside those planned for this initiative) are provided for.

### 9.5.14 Demand for roofed accommodation

- The Great Walks of Australia experience, although it does not offer a tropical island walking experience at present, provides a valuable comparator set. Accommodation types vary across the twelve walks but strike a balance between luxury and exclusivity. A typical unit price per person per night of approximately \$600 requires good levels of service and quality – while absolute 5-star luxury may not be required, it must be able to meet market expectations. Varying types of accommodation are acceptable along a

<sup>6&28</sup> EarthCheck Research, 2014

route. A combination of glamping and light frame 'hut' construction types would seem the most appropriate options given trail topography, sensitive environmental and landscape characteristics, weather conditions, and fit with market expectations.

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## 10 Options analysis

### 10.1 Introduction and purpose

The purpose of the Options Analysis is to evaluate the potential options for low-impact premium eco-accommodation on the Whitsunday Island Trail and identify the preferred option(s) to take forward for further analysis in the Feasibility Study. This chapter provides an overview of the methodology used to assess the options, documents the findings of the assessment and provides a recommendation for the preferred option(s) for further analysis.

sch4 Deliberative process

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## 10.3 Options

### 10.3.1 Options development

The options were developed from the components listed in Table 34. The Project team determined that the number of sites that could be developed on the site would range from one to three. The amenity ratings were provided by DES with only ratings 3 and 4 considered appropriate to meet the objectives of this project (see Appendix I for trail accommodation amenity classifications). The variations for the capacity of the proposed accommodation were agreed by the Project team and based on similar offerings in the market, as well as feedback from the market sounding.

**Table 34 Components of options**

Number of sites	Amenity options	Capacity options
<ul style="list-style-type: none"> <li>■ 1 site</li> </ul>	<ul style="list-style-type: none"> <li>■ Rating 3</li> </ul>	<ul style="list-style-type: none"> <li>■ 12 people per site</li> </ul>
<ul style="list-style-type: none"> <li>■ 2 sites</li> </ul>	<ul style="list-style-type: none"> <li>■ Rating 4</li> </ul>	<ul style="list-style-type: none"> <li>■ 24 people per site</li> </ul>
<ul style="list-style-type: none"> <li>■ 3 sites</li> </ul>		

### 10.3.2 High level assessment

It was determined that having only one site on the Island would not meet the project objectives of providing a premium experience and may not be attractive for private investment. Therefore, only options containing two or three sites were considered further in the MCA.

## 10.4 MCA criteria

### 10.4.1 Alignment with objectives

The Queensland Government is committed to delivering ecotourism experiences that are ecologically and environmentally sustainable, and that create employment for locals and opportunities for Traditional Owners. These key goals were incorporated into the MCA criteria.

### 10.4.2 Ideal site attributes

Market sounding was undertaken with a range of industry participants such as accommodation operators, guiding companies and industry bodies. The feedback collected proposed some indicative attributes that the market considers necessary for a successful ecotourism product in the Whitsunday region. These included:

- Perceived seclusion and uniqueness (through regulated use) is important for the premium experience. Users of the trail do not want to be part of a large crowd as this diminishes their immersive nature experience.
- High-end 'Luxury' accommodation is not necessary, visitors will care more about the creature comforts and amenities such as comfortable beds and good food and wine. People who choose to partake in these experiences may not expect to walk into 'resort-style' accommodation at the end of their walk. The accommodation needs to be appropriate for the environment and it is essential that all elements gel. It is important to keep accommodation as close to nature as possible.
- The styles of accommodation can vary throughout the trail without impacting the experience. Many *Great Walks of Australia* incorporate different experiences and accommodation types along the journey.

The complete findings of the market sounding can be found in Appendix J.



### 10.4.3 Agreed criteria

The criteria agreed were:

- Criteria A: Tourism growth and economic benefits

The degree to which the option supports tourism growth and broadens the Whitsunday region's tourism offering leading to new economic benefits (for example, employment) and diversifies opportunities for existing businesses.

- Criteria B: User experience

The degree to which the Trail will be recognised as an iconic and immersive nature experience that showcases the world class natural assets of Whitsunday Island, including the degree to which the option provides levels of perceived seclusion and uniqueness, and amenity and experience.

- Criteria C: Commercial and operational viability and sustainability

The financial and commercial sustainability of the Trail and the likely investment it will attract.

- Criteria D: Benefits to Traditional Owners

The degree to which the option will create meaningful long term, sustainable benefits and opportunities for the Traditional Owners, including business creation and employment.

- Criteria E: Environmental impacts

The impact the option would have on the existing environment and the likely ability to obtain required environmental approvals.

- Criteria F: Constructability

The degree of difficulty in constructing the accommodation on the island.

### 10.4.4 Criteria scoring

The MCA was completed by scoring each of the project options against the criteria using a 10-point colour rating system (with a background numerical scoring system) outlined Figure 18. A total score for each option was used to rank the options to determine the preferred site possibilities.

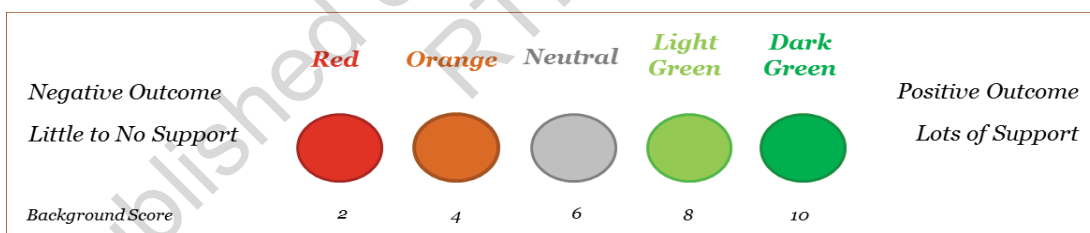


Figure 18 MCA 10-point scoring system

### 10.4.5 Criteria weighting

Criteria weightings were not used in this MCA due to the high-level nature of the options being analysed. It was considered that a simple two-step process would result in an appropriate outcome and ensure a high level of transparency.

sch4 Deliberative process

# 11 Construction and operational costs

## 11.1 Introduction and purpose

This chapter describes the approaches underpinning the development process for the construction and operational costs for the Project.

This section summarises the development of capital and operating cost estimates, which have been prepared to quantify the costs for planning, engineering, procurement, project management and construction management of the various proposed options for ecotourism infrastructure and services.

The capital costs were developed to cover all elements that may be required to create the premium ecotourism experiences proposed for the Project. It has been assumed that separate budgets are covering the cost of constructing the initial 29.6 km cross-island Whitsunday Island Trail.

The cost estimate has been undertaken on information available at this relatively early stage of project development and scope definition. The accuracy of project parameters and the risks of potential change in these variables can be improved by undertaking further feasibility assessments.

## 11.2 Project approach to estimating

The work tasks for the cost estimate have been broken down and assessed using a multi-discipline engineering approach. The following tasks were undertaken to prepare the components of the estimate:

- Data collection
- Concept engineering for option development
- Estimate Coordination
- GIS maps and sketches
- Safety and environmental considerations
- Reviewing previous technical specifications and projects for comparative market prices.

The scope of work sections for the Project have been broken down into option-based Work Breakdown Structures (WBS), for the identified infrastructure to detail out the project elements. The following standard estimating techniques have been used to build the estimate:

- Budget quotes for supply and installation were obtained where possible
- Where supply only costs were obtained, installation costs have been estimated based on comparative projects
- Empirical rates have been utilised for nominal quantities estimated from site investigations and similar projects where appropriate
- Each item has an individual contingency provision applied to it to capture potential cost variations for unaccounted or intangible construction issues
- A nominal accuracy has been nominated, consistent with the level of engineering able to be completed for the concept scopes and in the available time.

## 11.3 Images from Whitsunday Island visit

Costs for the Project have been in part estimated based on the viewed typography on site. Images from the Whitsunday Island site visit can be found in Appendix K.

A 360-degree photo model of the Tongue Point and Whitehaven Beach track ends is also available electronically.

## 11.4 References

The following documents were used as references to aid in determining the type of infrastructure that would be suitable for the project and preparing cost estimates:

- 'Queensland Ecotourism Development Toolkit' – Queensland Government
- 'Queensland Ecotourism Investment Opportunities - Implementation Framework Ecotourism Facilities on National Parks' – Queensland Government
- 'Best Practice Ecotourism Development Guidelines – October 2015' – Queensland Government
- 'Whitsunday and Mackay Islands Visitor Management Strategy – November 2007' – Queensland Government
- 'Hinchinbrook Island National Park Management Plan 2017' – Queensland Government
- 'Aerial and ground survey – Whitsunday Craig Walking Trailing Trail – 1 June 2018' – QPWS Alex Hoffman
- 'Evaluation of options to provide all-tide access for Tongue Bay, Whitsunday Island – December 2017' – International Coastal Management
- 'Southern Whitehaven Beach Visitor Precinct – Master Plan 2018-2028 – June 2018' – John Harper Landscape Designs
- 'Whitsundays Plan of Management Compilation No.4 – 1 January 2018' – Australian Government GRMPA
- 'Development Application Three Capes Track – Track, Accommodation, Gateway and Jetty Construction – June 2012' – Tasmania Parks and Wildlife Service
- 'Users guide to the Australian Walking Track Grading System' – Victoria Government DSE
- 'AS 2156.1 Walking tracks Part 1: Classification and signage —2001' – Australian Standards.

## 11.5 Premium ecotourism definition and guiding principles

The briefing documents for this project define premium ecotourism experiences requirements as:

*'The premium ecotourism experience will deliver unique, world class and high-quality experiences in national parks across Queensland. National parks are some of Queensland's most special places, and there is a dual focus on both their conservation and the provision of world-class recreation and ecotourism experiences for visitors.'*

In developing the scope for the capital estimates, the estimate attempts to balance these broad requirements with the principles and criteria in the Queensland Ecotourism Investment Opportunities *'Implementation Framework – Ecotourism Facilities on National Park'*. The seven guiding principles guide the consideration of ecotourism facilities in national parks. in are set out in the table below:

**Table 35 Guiding principles for ecotourism facilities in national parks**

Principle	Description
<b>Principle 1</b>	Ecotourism Facilities on national parks are located, designed and managed sensitively to ensure compatibility with the natural and cultural values of the national park
<b>Principle 2</b>	Ecotourism Facilities on national parks should offer unique or innovative visitor experience
<b>Principle 3</b>	Diverse experiences and settings are promoted
<b>Principle 4</b>	Ecotourism Facilities will provide for the public interest
<b>Principle 5</b>	Successful ecotourism operations are characterised by commercial operators who have commitment to environmental best practice
<b>Principle 6</b>	The authorisation of Ecotourism Facilities will be consistent and transparent while protecting the intellectual property of the Proponent

Principle	Description
<b>Principle 7</b>	The type and duration of authorities granted will recognise the level of investment and rate of return on investment

## 11.6 Best Practice Ecotourism Development Guidelines

The document 'Queensland Ecotourism Investment Opportunities - Implementation Framework Ecotourism Facilities on National Parks' sets out the following for the best practice Ecotourism Development Guidelines:

**Table 36 Best Practice Ecotourism development criteria**

Criterion	Description
<b>Criterion 1</b>	The operation is compatible with natural and cultural values of the national park.
<b>Criterion 2</b>	The operation is designed to fit within the character of the national park.
<b>Criterion 3</b>	The operation minimises its footprint on the Site.
<b>Criterion 4</b>	The operation contributes to protecting and positively enhancing the national park.
<b>Criterion 5</b>	The operation engages, involves and benefits Traditional Owners and local communities.
<b>Criterion 6</b>	The operation encourages visitors to appreciate and want to protect and conserve the national park.

sch4 Deliberative process

## 11.8 Walking track grade information

In order to establish the level of amenity for the required infrastructure and the cost for any additional track development to suit a premium ecotourism experience, it is important to appreciate that the initial Whitsunday Island Trail being developed by QPWS will be rated as a Grade 5 walking track. In order to match the level of experience that is appropriate for the proposed Whitsunday Island premium tours, it may be necessary to have additional track upgrades to Grade 4 in areas around the proposed accommodation and to lookouts and 'iconic view' points.

It was assumed for costing purposes that an additional 200m of track may need to be constructed for access to accommodation sites and lookouts for iconic views and interpretive experiences for a three-day walk and this is considered in the capital estimate under WBS W0200. The proposed Whitsunday Island Trail cross-island trek alignment and potential accommodation nodes are contained in Appendix L.

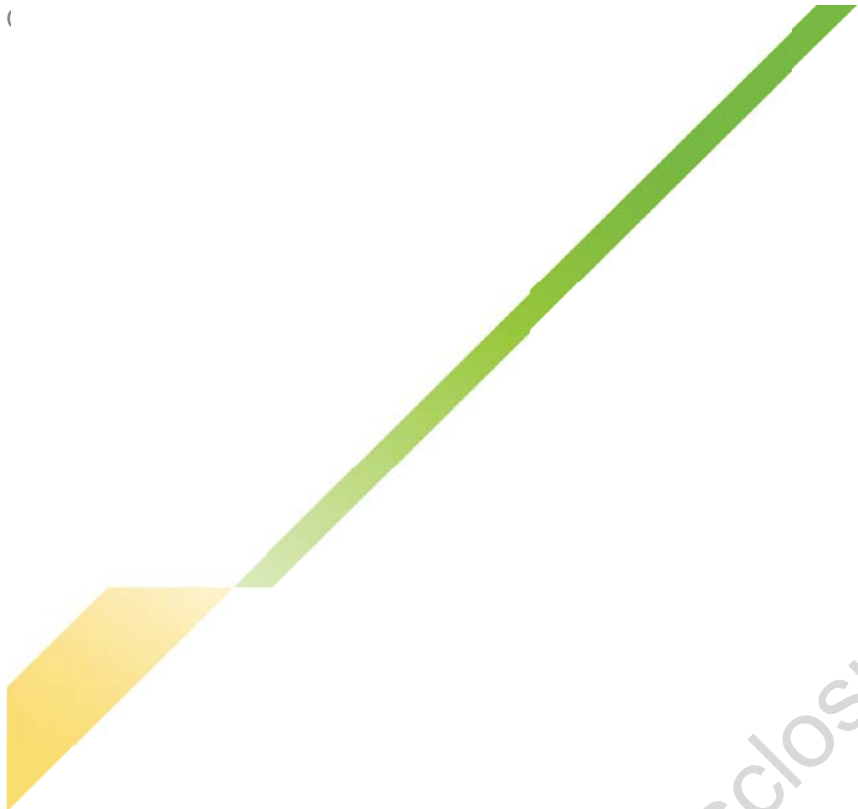
**Table 37 AS 2156.1 Walking track grade information – DSE Victoria Users Guide to Australian Walking Track Grading System**

Walk Grade	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<b>Symbol</b>	Symbol	Symbol	Symbol	Symbol	Symbol
<b>Distance</b>	Distance to complete walk. <5 km.	Distance to complete walk. <10 km.	Distance to complete walk. <20 km.	Distance to complete walk. Can be >20 km.	Distance to complete walk. Can be >20 km.
<b>Gradient</b>	Flat. < ramp 1:14	Gentle hills. < 1:10	Short steep hills, Generally 1:10.	Very steep.	Very steep and difficult.
<b>Quality of path</b>	Well-formed track.	Formed track.	Formed track, some obstacles.	Rough track, many obstacles.	Rough unformed track.
<b>Quality of markings</b>	Clearly sign posted.	Clearly sign posted.	Sign posted.	Limited signage.	No directional signage.
<b>Experience required</b>	No experience required.	No experience required.	Some bushwalking experience required.	Experienced bushwalkers.	Very experienced bushwalkers.
<b>Time</b>	High and low estimate of time needed to complete track (e.g. 1.5-2hrs).	High and low estimate of time needed to complete track (e.g. 1.5-2hrs).	Time needed to complete track (hours/days).	Time needed to complete track (hours/days).	Time needed to complete track (hours/days).
<b>Steps</b>	No steps.	Occasional steps.	Many steps.	N/A	N/A

### 11.8.1 QPWS Whitsunday Island trail accommodation sites selection

The Airlie Beach QPWS office has undertaken the ground truthing process for the Whitsunday Island Trail. The focus has been on establishing the Class 5 track for the National Park for general use and this is funded separately to any eco-accommodation initiatives. A QPWS report into the site investigations and ratings of suitable camping and accommodation sites can be found in Appendix M. Two sites were nominated as potential eco-accommodation locations. Criteria included access, view, exposure, water etc. On completion of the EOI process, further investigation for sites will be completed.

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# Appendices



# Appendix A

## Premium Ecotourism flowchart

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# Appendix B

## Whitsunday Island Risk Register

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## Appendix C

### Environment, heritage and legalisation references

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Appendix D  
Detailed Environmental Assessment

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# Appendix E

## Environmental desktop review reports

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# Appendix F

## Environmental constraints heat map

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## Appendix G

### Stakeholder and Community Consultation Plan

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## Appendix H

### Potential accommodation types

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# Appendix I

## Trail accommodation amenity classifications

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Appendix J  
Market sounding outcomes

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Appendix K

Whitsunday Island site visit images

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# Appendix L

## Map of Whitsunday Island Trail

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# Appendix M

## Potential Camp Sites and Accommodation

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Appendix N  
Detailed cost breakdown

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# Premium Ecotourism Flowchart

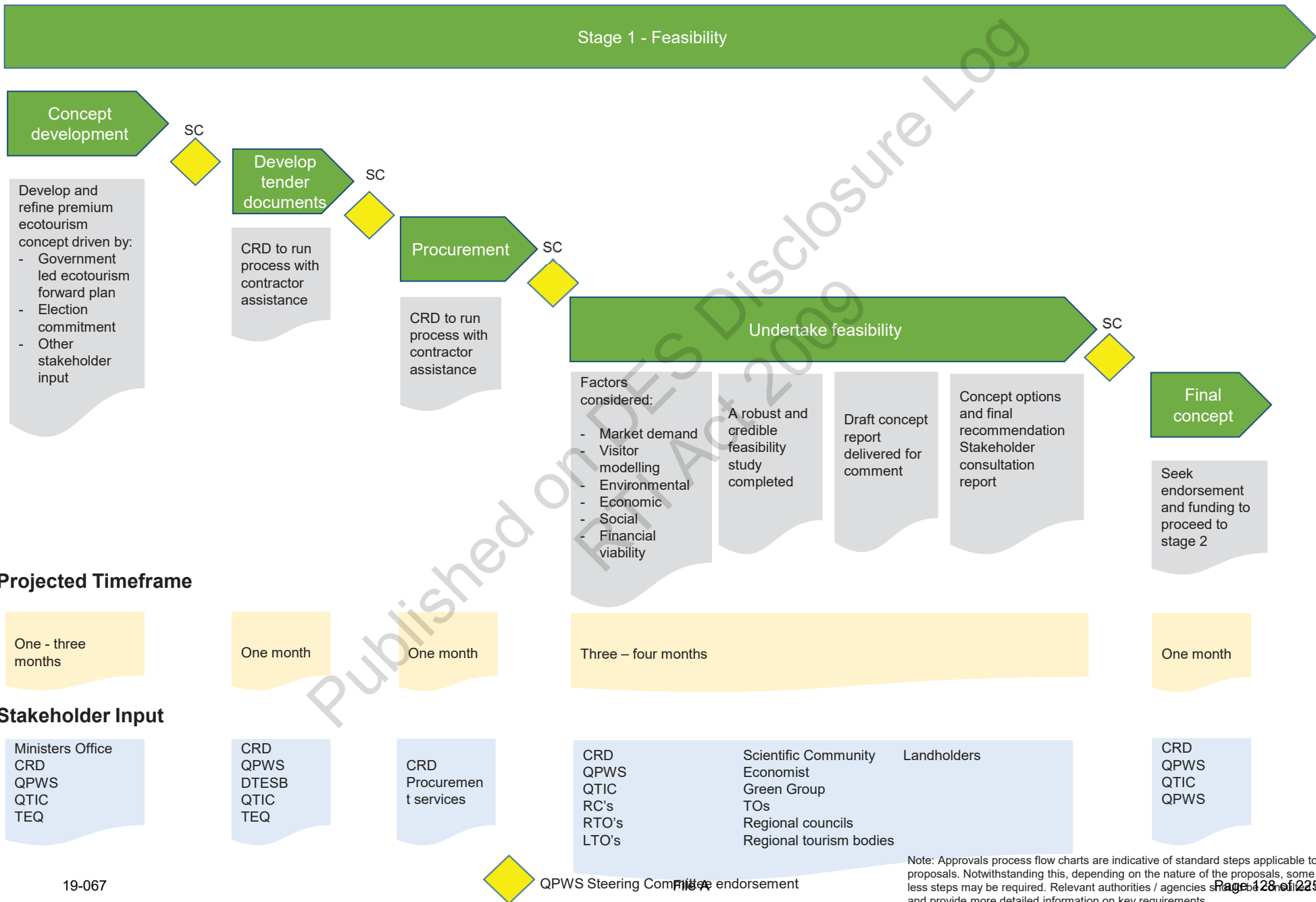
# Premium Ecotourism Facilities on National Park

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## What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

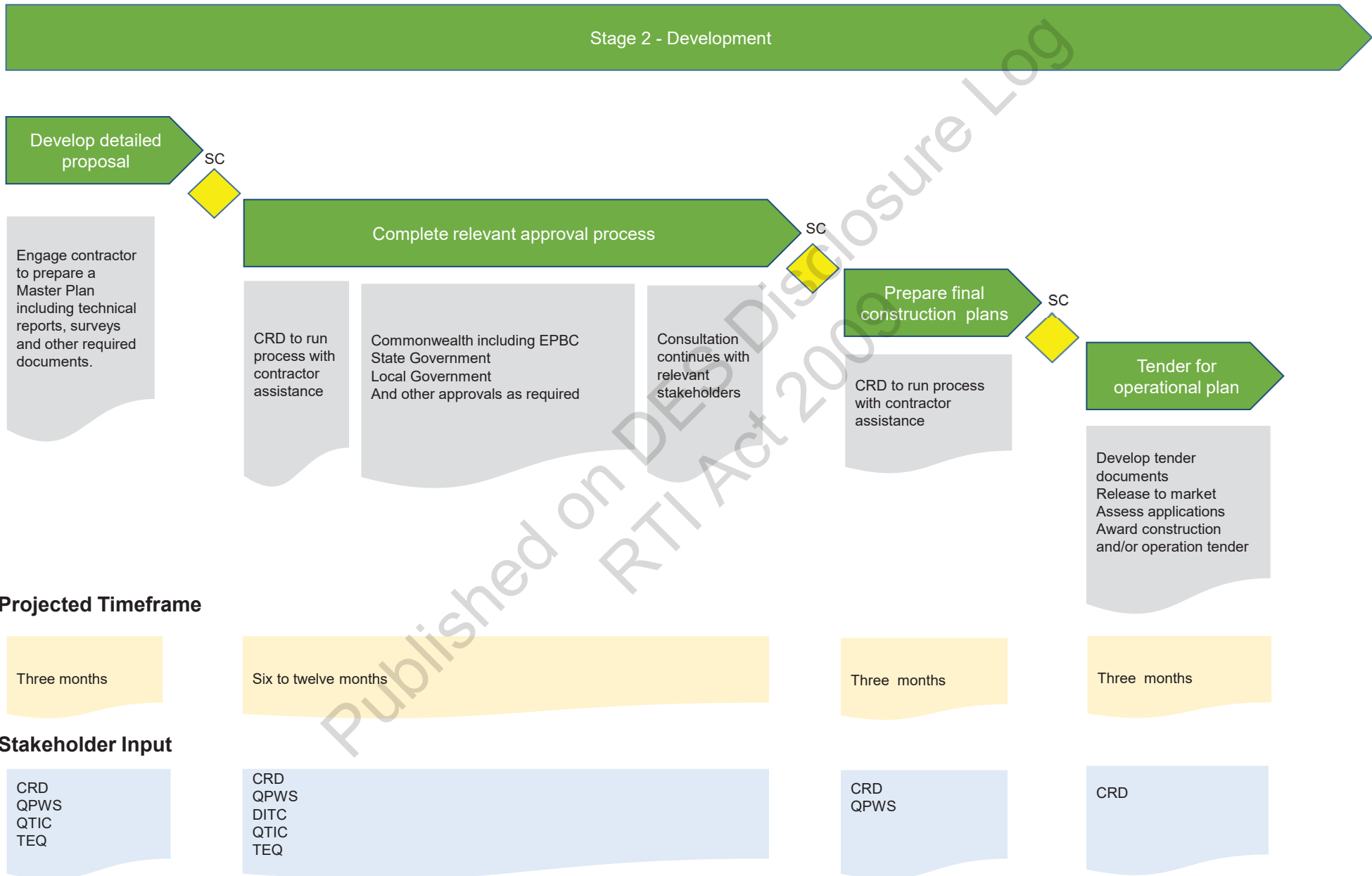
Source: adapted from NPSR, 2015.





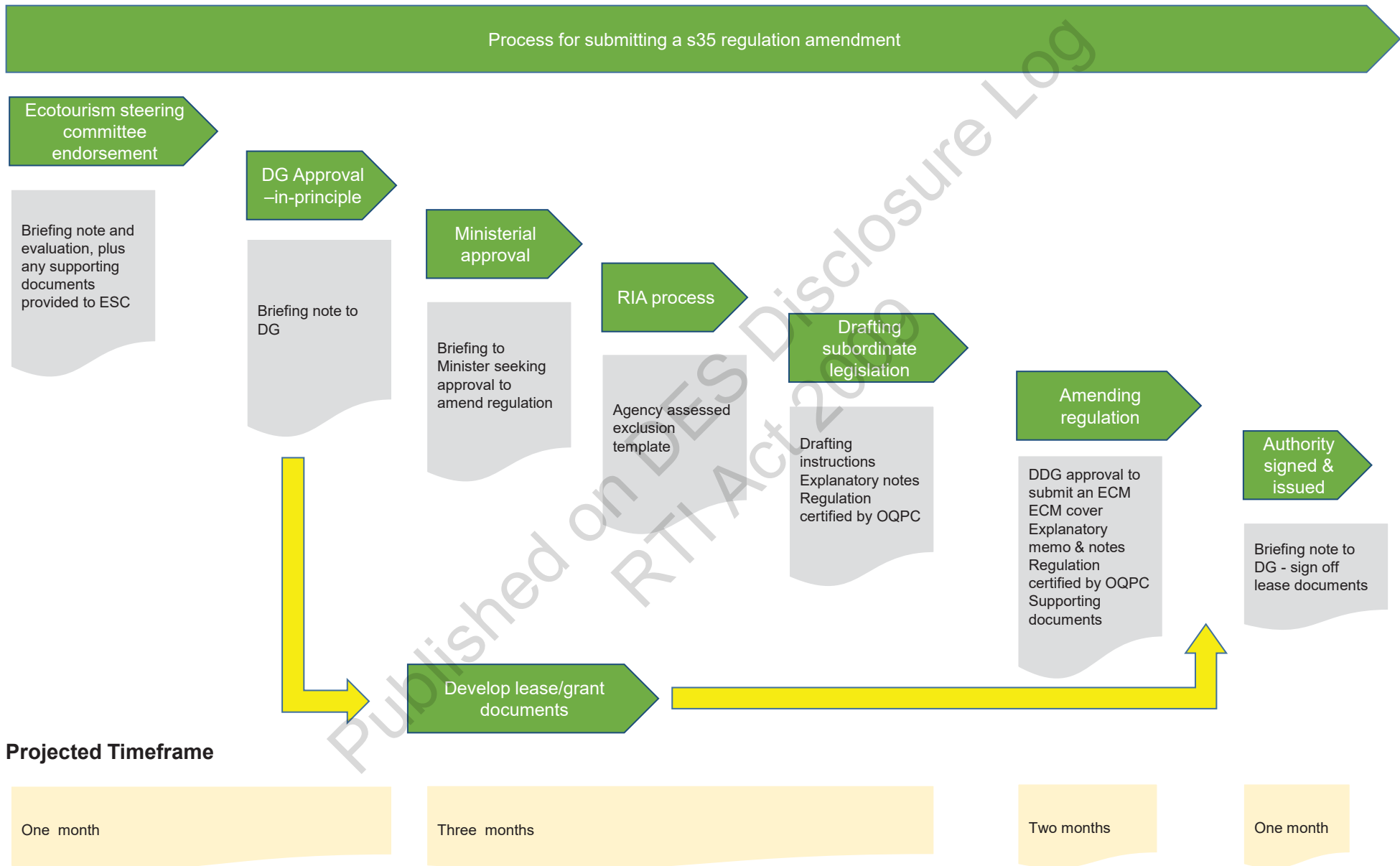
## What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

Source: adapted from NPSR, 2015.



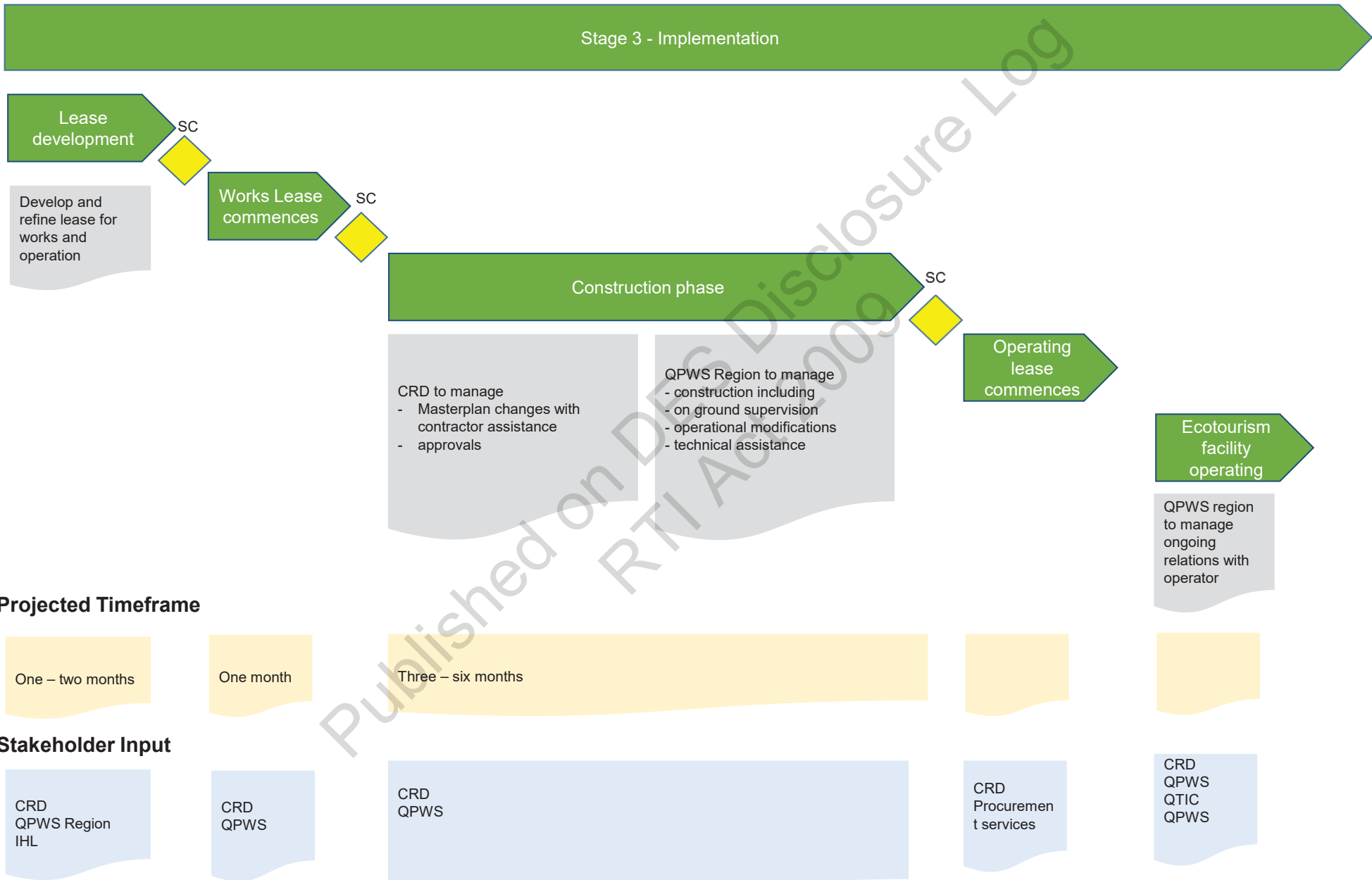
### What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

Source: adapted from NPSR, 2015.



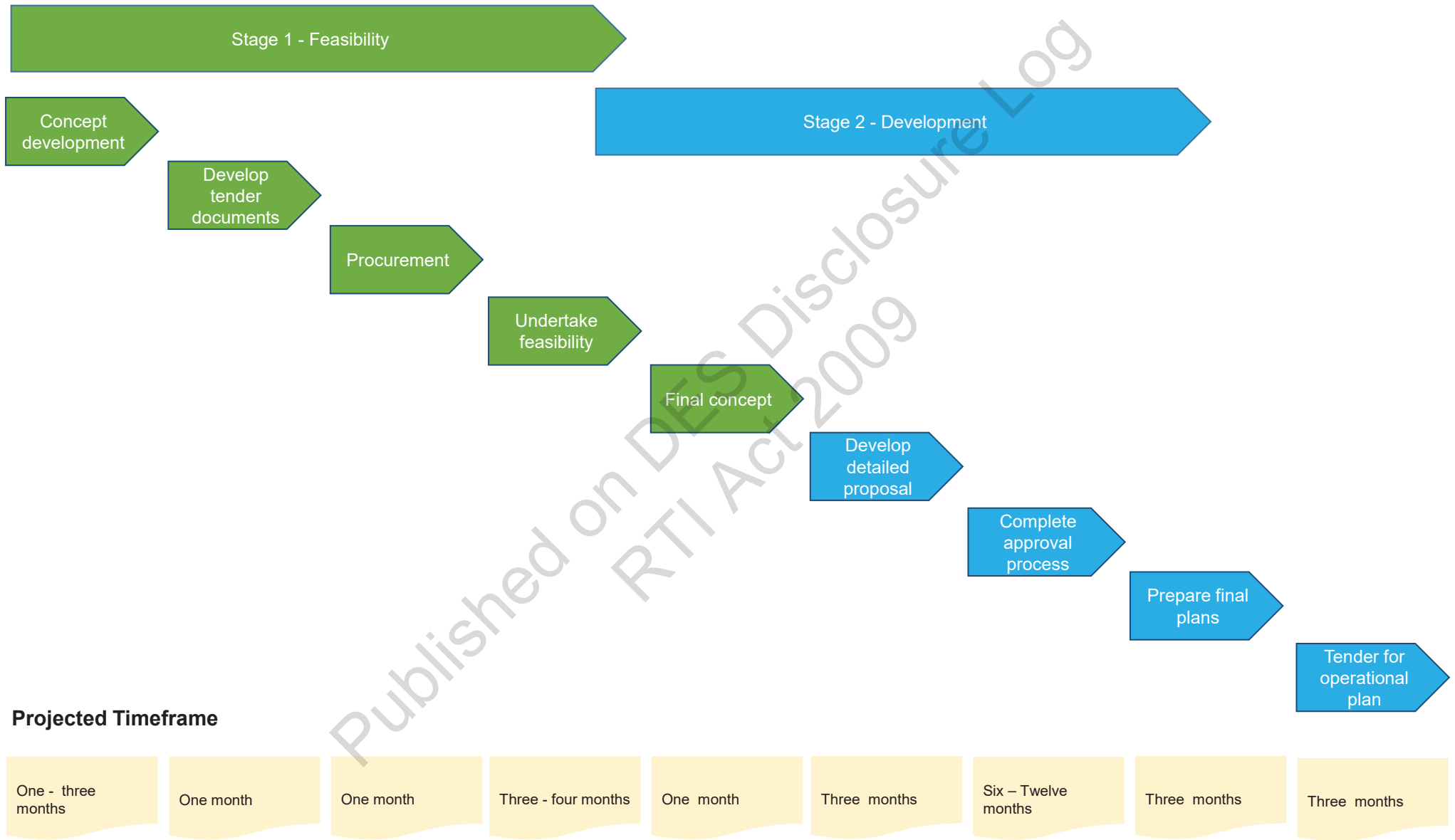
## What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

Source: adapted from NPSR, 2015.



### What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

Source: adapted from NPSR, 2015.



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## What are the key steps in the approval process for premium ecotourism facilities in National Parks and Conservation Parks?

Source: adapted from NPSR, 2015.

### Acronyms

MO	Ministers Office
DES	Department of Environment and Science
QPWS	Queensland Parks and Wildlife Service
CRD	Commercial and Recreation Development
SC	QPWS Steering Committee
DITC	Department of Innovation, Tourism Industry Development and the Commonwealth Games
QTIC	Queensland Tourism Industry Council
TEQ	Tourism and Events Queensland
RTO	Registered Training Organisation
RC	Regional Council
TO	Traditional Owners
ESC	Ecotourism steering committee (QPWS)
DG	Director General DES
QGPC	Office of the Qld Parliamentary Counsel
ECM	Executive council minute
IHL	In House Legal

Stakeholder Input

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# Whitsunday Island feasibility study risk register

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# References

# Appendix

## References

Department of Environment and Science (DES), 2018. *Draft key values for Whitsunday Island National Park*. Queensland Government, Brisbane.

Department of National Parks, Recreation, Sport and Racing (DNPRSR), 2013. *Whitsunday Islands National Parks and adjoining State Waters Management Statement 2013*. Queensland Government, Brisbane.

Department of Science, Information Technology, Innovation and the Arts (DSITIA), 2012. *Targeted species survey guidelines. Coastal sheathtail bat *Taphozous australis**. Queensland Government, Brisbane.

Queensland Parks and Wildlife Service (QPWS), 2018. *Cultural Heritage Management Agreement between the Queensland Parks and Wildlife Service and Ngaro People. Whitsunday Craig Walking Trail*. QPWS, Whitsunday.

Threatened Species Scientific Committee (TSSC), 2016. *Conservation Advice *Saccolaimus saccolaimus nudicluniatus*. Bare-rumped sheathtail bat*. Commonwealth of Australia, Canberra.

Threatened Species Scientific Committee (TSSC), 2014. *Conservation Advice *Phaius australis*. Lesser swamp orchid*. Commonwealth of Australia, Canberra.



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# Detailed environmental analysis

# Whitsunday Island Ecotourism Feasibility Study

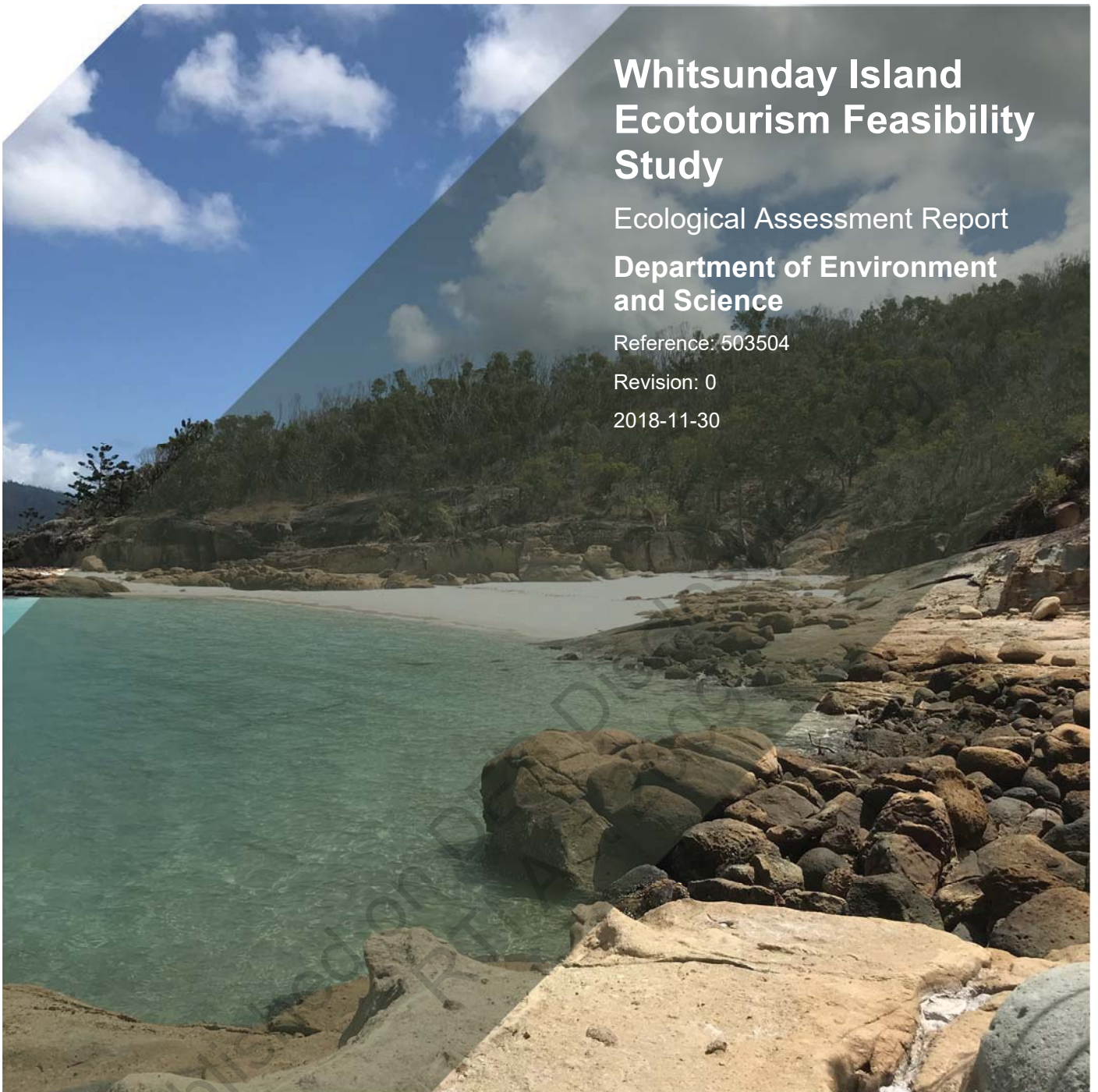
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Department of Environment  
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Reference: 503504

Revision: 0

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0	2018-11-30	Draft for client review	SW	TM		NAP	
<b>Current revision</b>		<b>0</b>					

Approval			
<b>Author signature</b>		<b>Approver signature</b>	
<b>Name</b>	Sandra Walters	<b>Name</b>	Neil Proposch
<b>Title</b>	Senior Ecologist	<b>Title</b>	Technical Director

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# Environment & cultural heritage

# Protected Matters Search Tool Report

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# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 25/07/18 13:37:20

[Summary](#)

[Details](#)

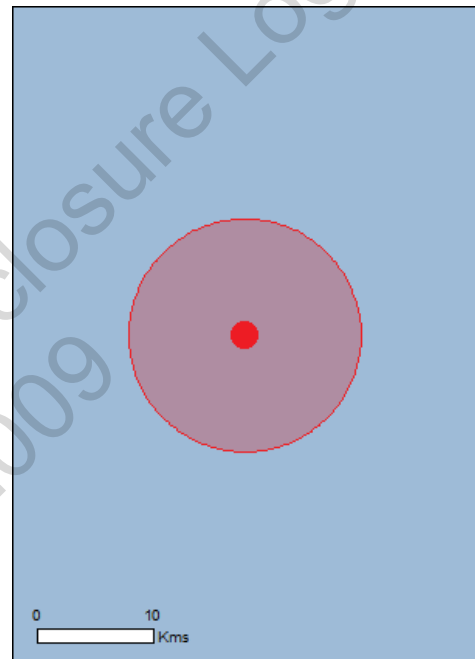
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# Summary

## Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	1
<a href="#">National Heritage Places:</a>	1
<a href="#">Wetlands of International Importance:</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	5
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	None
<a href="#">Listed Threatened Species:</a>	22
<a href="#">Listed Migratory Species:</a>	40

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Land:</a>	None
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	78
<a href="#">Whales and Other Cetaceans:</a>	12
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">State and Territory Reserves:</a>	1
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	5
<a href="#">Nationally Important Wetlands:</a>	1
<a href="#">Key Ecological Features (Marine)</a>	None

## Details

### Matters of National Environmental Significance

World Heritage Properties			[ Resource Information ]
Name	State	Status	
<a href="#">Great Barrier Reef</a>	QLD	Declared property	
National Heritage Properties			[ Resource Information ]
Name	State	Status	
Natural			
<a href="#">Great Barrier Reef</a>	QLD	Listed place	
Great Barrier Reef Marine Park			[ Resource Information ]
Type	Zone	IUCN	
Conservation Park	CP-20-4081	IV	
Habitat Protection	HP-19-5165	VI	
Marine National Park	MNP-20-1115	II	
Marine National Park	MNP-20-1118	II	
Marine National Park	MNP-20-1116	II	
Listed Threatened Species			[ Resource Information ]
Name	Status	Type of Presence	
Birds			
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area	
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area	
<a href="#">Fregetta grallaria grallaria</a> White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	
<a href="#">Limosa lapponica baueri</a> Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area	
<a href="#">Limosa lapponica menzbieri</a> Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area	
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	
<a href="#">Pterodroma neglecta neglecta</a> Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	
Mammals			



Name	Status	Type of Presence
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Macroderma gigas</a> Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Breeding known to occur within area

#### Plants

<a href="#">Phaius australis</a> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
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#### Reptiles

<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area

#### Sharks

<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

#### Listed Migratory Species

[ [Resource Information](#) ]

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Migratory Marine Birds</b>		
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat known to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<b>Migratory Marine Species</b>		
<a href="#">Anoxypristis cuspidata</a> Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding known to occur within area
<a href="#">Crocodylus porosus</a> Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Dugong dugon</a> Dugong [28]		Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
<a href="#">Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat likely to occur within area
<a href="#">Manta birostris</a> Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat likely to occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Breeding known to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
<a href="#">Orcaella brevirostris</a> Irrawaddy Dolphin [45]		Species or species habitat likely to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat likely to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area

## Other Matters Protected by the EPBC Act

Listed Marine Species		[ Resource Information ]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat likely to occur within area
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat known to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Species or species habitat known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Cuculus saturatus</a> Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<b>Fish</b>		
<a href="#">Acentronura tentaculata</a> Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
<a href="#">Campichthys tryoni</a> Tryon's Pipefish [66193]		Species or species habitat may occur within area
<a href="#">Choeroichthys brachysoma</a> Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
<a href="#">Choeroichthys suillus</a> Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
<a href="#">Corythoichthys amplexus</a> Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
<a href="#">Corythoichthys flavofasciatus</a> Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
<a href="#">Corythoichthys intestinalis</a> Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
<a href="#">Corythoichthys ocellatus</a> Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
<a href="#">Corythoichthys paxtoni</a> Paxton's Pipefish [66204]		Species or species habitat may occur within area
<a href="#">Corythoichthys schultzi</a> Schultz's Pipefish [66205]		Species or species habitat may occur within area
<a href="#">Cosmocampus darrosanus</a> D'Arros Pipefish [66207]		Species or species habitat may occur within area
<a href="#">Doryrhamphus excisus</a> Blue-stripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
<a href="#">Festucalex cinctus</a> Girdled Pipefish [66214]		Species or species habitat may occur within area
<a href="#">Halicampus dunckeri</a> Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
<a href="#">Halicampus grayi</a> Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
<a href="#">Halicampus nitidus</a> Glittering Pipefish [66224]		Species or species habitat may occur within area
<a href="#">Halicampus spinirostris</a> Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
<a href="#">Hippichthys cyanospilos</a> Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
<a href="#">Hippichthys heptagonus</a> Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
<a href="#">Hippichthys penicillus</a> Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
<a href="#">Hippocampus bargibanti</a> Pygmy Seahorse [66721]		Species or species habitat may occur within area
<a href="#">Hippocampus kuda</a> Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
<a href="#">Hippocampus planifrons</a> Flat-face Seahorse [66238]		Species or species habitat may occur within area
<a href="#">Hippocampus zebra</a> Zebra Seahorse [66241]		Species or species habitat may occur within area
<a href="#">Micrognathus andersonii</a> Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area
<a href="#">Micrognathus brevisrostris</a> thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
<a href="#">Nannocampus pictus</a> Painted Pipefish, Reef Pipefish [66263]		Species or species habitat may occur within area
<a href="#">Solegnathus hardwickii</a> Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
<a href="#">Solenostomus cyanopterus</a> Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
<a href="#">Solenostomus paradoxus</a> Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Syngnathoides biaculeatus</a> Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
<a href="#">Trachyrhamphus bicoarctatus</a> Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
<a href="#">Trachyrhamphus longirostris</a> Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
<b>Mammals</b>		
<a href="#">Dugong dugon</a> Dugong [28]		Species or species habitat known to occur within area
<b>Reptiles</b>		
<a href="#">Acalyptophis peronii</a> Horned Seasnake [1114]		Species or species habitat may occur within area
<a href="#">Aipysurus duboisii</a> Dubois' Seasnake [1116]		Species or species habitat may occur within area
<a href="#">Aipysurus eydouxii</a> Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
<a href="#">Aipysurus laevis</a> Olive Seasnake [1120]		Species or species habitat may occur within area
<a href="#">Astrotia stokesii</a> Stokes' Seasnake [1122]		Species or species habitat may occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding known to occur within area
<a href="#">Crocodylus porosus</a> Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Disteira kingii</a> Spectacled Seasnake [1123]		Species or species habitat may occur within area
<a href="#">Disteira major</a> Olive-headed Seasnake [1124]		Species or species habitat may occur within area
<a href="#">Enhydrina schistosa</a> Beaked Seasnake [1126]		Species or species habitat may occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Hydrophis elegans</a> Elegant Seasnake [1104]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Hydrophis mcdowelli</a> null [25926]		Species or species habitat may occur within area
<a href="#">Hydrophis ornatus</a> Spotted Seasnake, Ornate Reef Seasnake [1111]		Species or species habitat may occur within area
<a href="#">Lapemis hardwickii</a> Spine-bellied Seasnake [1113]		Species or species habitat may occur within area
<a href="#">Laticauda colubrina</a> a sea krait [1092]		Species or species habitat may occur within area
<a href="#">Laticauda laticaudata</a> a sea krait [1093]		Species or species habitat may occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
<a href="#">Pelamis platurus</a> Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

### Whales and other Cetaceans [ Resource Information ]

Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#">Balaenoptera acutorostrata</a> Minke Whale [33]		Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Breeding known to occur within area
<a href="#">Orcaella brevirostris</a> Irrawaddy Dolphin [45]		Species or species habitat likely to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
<a href="#">Stenella attenuata</a> Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area



Name	Status	Type of Presence
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

## Extra Information

### State and Territory Reserves [\[ Resource Information \]](#)

Name	State
Whitsunday Islands	QLD

### Invasive Species [\[ Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
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#### Birds

Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
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#### Mammals

Capra hircus Goat [2]		Species or species habitat likely to occur within area
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Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
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#### Plants

Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
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#### Reptiles

Lepidodactylus lugubris Mourning Gecko [1712]		Species or species habitat likely to occur within area
--	--	--

### Nationally Important Wetlands [\[ Resource Information \]](#)

Name	State
<a href="#">Great Barrier Reef Marine Park</a>	QLD

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

## Coordinates

-20.25118 148.97931

## Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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# Wildlife Online Report

Published on DES Disclosure Log  
RTI Act 2009



# Queensland Government

## Wildlife Online Extract

Search Criteria: Species List for a Specified Point  
Species: All  
Type: All  
Status: All  
Records: All  
Date: All  
Latitude: -20.2512  
Longitude: 148.9793  
Distance: 10  
Email: sandra.walters@aurecongroup.com  
Date submitted: Wednesday 25 Jul 2018 14:03:40  
Date extracted: Wednesday 25 Jul 2018 14:10:03

The number of records retrieved = 476

### **Disclaimer**

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	<i>Litoria caerulea</i>	common green treefrog		C		3/1
animals	birds	Acanthizidae	<i>Gerygone palpebrosa</i>	fairy gerygone		C		8
animals	birds	Acanthizidae	<i>Smicromnis brevirostris</i>	weebill		C		1
animals	birds	Acanthizidae	<i>Gerygone levigaster</i>	mangrove gerygone		C		1
animals	birds	Accipitridae	<i>Pandion cristatus</i>	eastern osprey		SL		45/1
animals	birds	Accipitridae	<i>Aquila audax</i>	wedge-tailed eagle		C		10
animals	birds	Accipitridae	<i>Haliastur sphenurus</i>	whistling kite		C		1
animals	birds	Accipitridae	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle		C		42
animals	birds	Accipitridae	<i>Accipiter cirrocephalus</i>	collared sparrowhawk		C		1
animals	birds	Accipitridae	<i>Accipiter novaehollandiae</i>	grey goshawk		C		2
animals	birds	Accipitridae	<i>Aviceda subcristata</i>	Pacific baza		C		1
animals	birds	Accipitridae	<i>Haliastur indus</i>	brahmyny kite		C		15
animals	birds	Anatidae	<i>Dendrocygna arcuata</i>	wandering whistling-duck		C		2
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		2
animals	birds	Anatidae	<i>Tadorna radjah</i>	radjah shelduck		C		1
animals	birds	Ardeidae	<i>Egretta sacra</i>	eastern reef egret		C		28
animals	birds	Ardeidae	<i>Butorides striata</i>	striated heron		C		4
animals	birds	Artamidae	<i>Artamus leucorhynchus</i>	white-breasted woodswallow		C		18
animals	birds	Artamidae	<i>Cracticus quoyi</i>	black butcherbird		C		1
animals	birds	Artamidae	<i>Strepera graculina</i>	pieb currawong		C		19
animals	birds	Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew		C		8
animals	birds	Burhinidae	<i>Esacus magnirostris</i>	beach stone-curlew		V		13
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		21
animals	birds	Campephagidae	<i>Lalage leucomela</i>	varied triller		C		17
animals	birds	Campephagidae	<i>Coracina tenuirostris</i>	cicadabird		C		1
animals	birds	Caprimulgidae	<i>Caprimulgus macrurus</i>	large-tailed nightjar		C		1
animals	birds	Charadriidae	<i>Vanellus miles miles</i>	masked lapwing (northern subspecies)		C		2
animals	birds	Charadriidae	<i>Charadrius ruficapillus</i>	red-capped plover		C		4
animals	birds	Columbidae	<i>Chalcophaps indica</i>	emerald dove		C		2
animals	birds	Columbidae	<i>Ptilinopus regina</i>	rose-crowned fruit-dove		C		7
animals	birds	Columbidae	<i>Ducula bicolor</i>	pieb imperial-pigeon		C		7
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		12
animals	birds	Columbidae	<i>Lopholaimus antarcticus</i>	topknot pigeon		C		1
animals	birds	Columbidae	<i>Ptilinopus superbus</i>	superb fruit-dove		C		5
animals	birds	Columbidae	<i>Ptilinopus magnificus</i>	wompoo fruit-dove		C		5
animals	birds	Columbidae	<i>Macropygia amboinensis</i>	brown cuckoo-dove		C		4
animals	birds	Columbidae	<i>Leucosarcia melanoleuca</i>	wonga pigeon		C		1
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		16
animals	birds	Corvidae	<i>Corvus coronoides</i>	Australian raven		C		1
animals	birds	Cuculidae	<i>Chalcites basalis</i>	Horsfield's bronze-cuckoo		C		1
animals	birds	Cuculidae	<i>Chalcites lucidus</i>	shining bronze-cuckoo		C		2
animals	birds	Cuculidae	<i>Chalcites minutillus</i>	little bronze-cuckoo		C		1
animals	birds	Cuculidae	<i>Centropus phasianinus</i>	pheasant coucal		C		5
animals	birds	Cuculidae	<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo		C		2
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		6
animals	birds	Dicruridae	<i>Dicrurus bracteatus</i>	spangled drongo		C		6

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Falconidae	<i>Falco peregrinus</i>	peregrine falcon		C		1
animals	birds	Falconidae	<i>Falco cenchroides</i>	nankeen kestrel		C		1
animals	birds	Haematopodidae	<i>Haematopus fuliginosus</i>	sooty oystercatcher		C		12
animals	birds	Haematopodidae	<i>Haematopus longirostris</i>	Australian pied oystercatcher		C		22
animals	birds	Halcyonidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		22
animals	birds	Halcyonidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		7
animals	birds	Halcyonidae	<i>Todiramphus sordidus</i>	Torresian kingfisher		C		3
animals	birds	Halcyonidae	<i>Dacelo leachii</i>	blue-winged kookaburra		C		2
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		12
animals	birds	Hirundinidae	<i>Petrochelidon nigricans</i>	tree martin		C		1
animals	birds	Laridae	<i>Thalasseus bergii</i>	crested tern		SL		18
animals	birds	Laridae	<i>Chroicocephalus novaehollandiae</i>	silver gull		C		45
animals	birds	Laridae	<i>Thalasseus bengalensis</i>	lesser crested tern		C		4
animals	birds	Laridae	<i>Onychoprion anaethetus</i>	bridled tern		SL		2
animals	birds	Laridae	<i>Sternula albifrons</i>	little tern		SL		1
animals	birds	Laridae	<i>Sterna sumatrana</i>	black-naped tern		SL		4
animals	birds	Laridae	<i>Anous stolidus</i>	common noddy		SL		1
animals	birds	Laridae	<i>Anous minutus</i>	black noddy		C		1/1
animals	birds	Megapodiidae	<i>Megapodius reinwardt</i>	orange-footed scrubfowl		C		18
animals	birds	Meliphagidae	<i>Myzomela obscura</i>	dusky honeyeater		C		13
animals	birds	Meliphagidae	<i>Philemon corniculatus</i>	noisy friarbird		C		2
animals	birds	Meliphagidae	<i>Philemon buceroides</i>	helmeted friarbird		C		4
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		20
animals	birds	Meliphagidae	<i>Myzomela sanguinolenta</i>	scarlet honeyeater		C		1
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		C		5
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		9
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		1
animals	birds	Monarchidae	<i>Symposiachrus trivirgatus</i>	spectacled monarch		SL		15
animals	birds	Monarchidae	<i>Carterornis leucotis</i>	white-eared monarch		C		1
animals	birds	Monarchidae	<i>Myiagra alecto</i>	shining flycatcher		C		4
animals	birds	Nectariniidae	<i>Nectarinia jugularis</i>	olive-backed sunbird		C		10
animals	birds	Nectariniidae	<i>Dicaeum hirundinaceum</i>	mistletoebird		C		11
animals	birds	Oriolidae	<i>Sphecotheres vieilloti</i>	Australasian figbird		C		7
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		2
animals	birds	Pachycephalidae	<i>Colluricincla megarhyncha</i>	little shrike-thrush		C		18
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		1
animals	birds	Pachycephalidae	<i>Pachycephala pectoralis</i>	golden whistler		C		6
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		4
animals	birds	Passeridae	<i>Passer domesticus</i>	house sparrow		Y		2
animals	birds	Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican		C		19
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		1
animals	birds	Phalacrocoracidae	<i>Phalacrocorax varius</i>	pied cormorant		C		9
animals	birds	Phasianidae	<i>Coturnix ypsilophora</i>	brown quail		C		1
animals	birds	Pittidae	<i>Pitta versicolor</i>	noisy pitta		C		17
animals	birds	Psittacidae	<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet		C		14
animals	birds	Psittacidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet		C		1

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animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen		C		1
animals	birds	Rhipiduridae	<i>Rhipidura rufifrons</i>	rufous fantail		SL		4
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		6
animals	birds	Scolopacidae	<i>Numenius phaeopus</i>	whimbrel		SL		2
animals	birds	Scolopacidae	<i>Arenaria interpres</i>	ruddy turnstone		SL		1
animals	birds	Scolopacidae	<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit		V	V	1
animals	birds	Scolopacidae	<i>Numenius madagascariensis</i>	eastern curlew		E	CE	5
animals	birds	Scolopacidae	<i>Tringa nebularia</i>	common greenshank		SL		3
animals	birds	Scolopacidae	<i>Tringa brevipes</i>	grey-tailed tattler		SL		2
animals	birds	Strigidae	<i>Ninox boobook</i>	southern boobook		C		7
animals	birds	Sulidae	<i>Sula leucogaster</i>	brown booby		SL		2
animals	birds	Sulidae	<i>Sula dactylatra</i>	masked booby		SL		1
animals	birds	Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis		C		1
animals	birds	Timaliidae	<i>Zosterops lateralis</i>	silveryeye		C		7
animals	cartilaginous fishes	Dasyatidae	<i>Hemirhynchus fluviorum</i>	estuary stingray		NT		1
animals	insects	Formicidae	<i>Oecophylla smaragdina</i>	green tree ant				1
animals	insects	Nymphalidae	<i>Euploea corinna</i>	common crow				1
animals	insects	Nymphalidae	<i>Euploea tulliolus tulliolus</i>	purple crow				2
animals	insects	Nymphalidae	<i>Tirumala hamata hamata</i>	blue tiger				3
animals	insects	Papilionidae	<i>Papilio aegaeus aegaeus</i>	orchard swallowtail (Australian subspecies)				1
animals	insects	Papilionidae	<i>Graphium macfarlanei macfarlanei</i>	green triangle				1
animals	insects	Pieridae	<i>Eurema hecabe</i>	large grass-yellow				1
animals	insects	Pieridae	<i>Catopsilia pomona</i>	lemon migrant				1
animals	mammals	Balaenopteridae	<i>Megaptera novaeangliae</i>	humpback whale		V	V	8
animals	mammals	Bovidae	<i>Capra hircus</i>	goat	Y			6
animals	mammals	Cervidae	<i>Cervus timorensis</i>	rusa deer	Y			2
animals	mammals	Delphinidae	<i>Sousa sahalensis</i>	Australian humpback dolphin		V		2
animals	mammals	Delphinidae	<i>Tursiops aduncus</i>	Indo-Pacific bottlenose dolphin		C		1
animals	mammals	Dugongidae	<i>Dugong dugon</i>	dugong		V		7
animals	mammals	Macropodidae	<i>Petrogale inornata</i>	unadorned rock-wallaby		C		20/3
animals	mammals	Muridae	<i>Melomys cervinipes</i>	fawn-footed melomys		C		22
animals	mammals	Muridae	<i>Hydromys chrysogaster</i>	water rat		C		8
animals	mammals	Phalangeridae	<i>Trichosurus vulpecula</i>	common brushtail possum		C		4
animals	mammals	Pteropodidae	<i>Pteropus alecto</i>	black flying-fox		C		1
animals	reptiles	Boidae	<i>Morelia spilota</i>	carpet python		C		6
animals	reptiles	Boidae	<i>Antaresia maculosa</i>	spotted python		C		9/1
animals	reptiles	Carphodactylidae	<i>Phyllurus ossa</i>	Mount Ossa broad-tailed gecko		C		5/5
animals	reptiles	Cheloniidae	<i>Chelonia mydas</i>	green turtle		V	V	5
animals	reptiles	Colubridae	<i>Dendrelaphis punctulatus</i>	green tree snake		C		4
animals	reptiles	Colubridae	<i>Boiga irregularis</i>	brown tree snake		C		1
animals	reptiles	Crocodylidae	<i>Crocodylus porosus</i>	estuarine crocodile		V		2
animals	reptiles	Diplodactylidae	<i>Amalosia rhombifer</i>	zig-zag gecko		C		2
animals	reptiles	Elapidae	<i>Demansia torquata</i>	collared whipsnake		C		10/1
animals	reptiles	Elapidae	<i>Acanthophis antarcticus</i>	common death adder		V		1
animals	reptiles	Elapidae	<i>Cacophis churchilli</i>	northern dwarf crowned snake		C		1



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animals	reptiles	Gekkonidae	<i>Gehyra dubia</i>	dubious dtella		C		7/1
animals	reptiles	Gekkonidae	<i>Hemidactylus frenatus</i>	house gecko	Y			1
animals	reptiles	Gekkonidae	<i>Heteronotia binoei</i>	Bynoe's gecko		C		2
animals	reptiles	Scincidae	<i>Cryptoblepharus virgatus sensu lato</i>			C		8
animals	reptiles	Scincidae	<i>Cryptoblepharus litoralis litoralis</i>	coastal snake-eyed skink		C		12/1
animals	reptiles	Scincidae	<i>Cryptoblepharus pulcher pulcher</i>	elegant snake-eyed skink		C		6/2
animals	reptiles	Scincidae	<i>Carlia pectoralis sensu lato</i>			C		7
animals	reptiles	Scincidae	<i>Glaphyromorphus punctulatus</i>	fine-spotted mulch-skink		C		2
animals	reptiles	Scincidae	<i>Concinnia brachysoma</i>	northern bar-sided skink		C		3/1
animals	reptiles	Scincidae	<i>Carlia rhomboidalis</i>	blue-throated rainbow-skink		C		17/3
animals	reptiles	Scincidae	<i>Ctenotus spaldingi</i>	straight-browed ctenotus		C		8
animals	reptiles	Scincidae	<i>Concinnia sokosoma</i>	stout bar-sided skink		C		5
animals	reptiles	Scincidae	<i>Bellatorias frerei</i>	major skink		C		11
animals	reptiles	Scincidae	<i>Carlia schmeltzii</i>	robust rainbow-skink		C		5
animals	reptiles	Scincidae	<i>Concinnia tenuis</i>	bar-sided skink		C		7
animals	reptiles	Scincidae	<i>Carlia inconnexa</i>	Whitsunday rainbow skink		C		8/8
animals	reptiles	Scincidae	<i>Carlia decora</i>	elegant rainbow skink		C		2/2
animals	reptiles	Scincidae	<i>Carlia vivax</i>	tussock rainbow-skink		C		1
animals	reptiles	Scincidae	<i>Carlia sp.</i>					2
animals	reptiles	Varanidae	<i>Varanus varius</i>	lace monitor		C		22
animals	reptiles	Varanidae	<i>Varanus gouldii</i>	sand monitor		C		1
animals	uncertain	Indeterminate	<i>Indeterminate</i>	Unknown or Code Pending		C		3
plants	conifers	Araucariaceae	<i>Araucaria cunninghamii var. cunninghamii</i>			C		1/1
plants	ferns	Dryopteridaceae	<i>Lastreopsis tenera</i>			C		1/1
plants	ferns	Nephrolepidaceae	<i>Nephrolepis hirsutula</i>			C		1/1
plants	ferns	Ophioglossaceae	<i>Ophioglossum pendulum</i>	ribbon fern		C		1/1
plants	ferns	Ophioglossaceae	<i>Ophioglossum lusitanicum</i>	adder's tongue		C		1/1
plants	ferns	Polypodiaceae	<i>Platynerium bifurcatum</i>			C		1/1
plants	ferns	Polypodiaceae	<i>Pyrrosia confluens var. confluens</i>			C		1
plants	ferns	Polypodiaceae	<i>Microsorium grossum</i>			C		1/1
plants	ferns	Polypodiaceae	<i>Microsorium punctatum</i>			C		1/1
plants	ferns	Pteridaceae	<i>Taenitis pinnata</i>	morse fern		C		1/1
plants	ferns	Pteridaceae	<i>Adiantum atroviride</i>			C		1/1
plants	ferns	Pteridaceae	<i>Cheilanthes sieberi subsp. sieberi</i>			C		2/2
plants	ferns	Pteridaceae	<i>Adiantum hispidulum var. hispidulum</i>			C		2/2
plants	higher dicots	Acanthaceae	<i>Harniera hygrophiloides</i>	white karambal		C		1/1
plants	higher dicots	Acanthaceae	<i>Graptophyllum spinigerum</i>			C		1/1
plants	higher dicots	Aizoaceae	<i>Carpobrotus glaucescens</i>	pigface		C		1/1
plants	higher dicots	Amaranthaceae	<i>Celosia argentea</i>		Y			1/1
plants	higher dicots	Amaranthaceae	<i>Deeringia amaranthoides</i>	redberry		C		1/1
plants	higher dicots	Anacardiaceae	<i>Mangifera indica</i>	mango	Y			1/1
plants	higher dicots	Apiaceae	<i>Mackinlaya macrosciadea</i>	mackinlaya		C		1/1
plants	higher dicots	Araliaceae	<i>Polyscias australiana</i>	ivory basswood		C		1/1
plants	higher dicots	Araliaceae	<i>Polyscias elegans</i>	celery wood		C		3/1
plants	higher dicots	Asteraceae	<i>Gynura drymophila var. drymophila</i>			C		1/1
plants	higher dicots	Asteraceae	<i>Xerochrysum bracteatum</i>	golden everlasting daisy		C		1/1

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plants	higher dicots	Asteraceae	<i>Coronidium cymosum</i>			C		2/2
plants	higher dicots	Asteraceae	<i>Camptacra barbata</i>			C		1/1
plants	higher dicots	Asteraceae	<i>Emilia sonchifolia</i> var. <i>sonchifolia</i>		Y			1/1
plants	higher dicots	Asteraceae	<i>Acmella grandiflora</i> var. <i>brachyglossa</i>			C		2/2
plants	higher dicots	Balanophoraceae	<i>Balanophora fungosa</i>			C		2/2
plants	higher dicots	Bignoniaceae	<i>Pandorea pandorana</i>	wonga vine		C		2/2
plants	higher dicots	Byttneriaceae	<i>Commersonia bartramia</i>	brown kurrajong		C		1/1
plants	higher dicots	Capparaceae	<i>Capparis lucida</i>			C		2/2
plants	higher dicots	Capparaceae	<i>Capparis</i>			C		1/1
plants	higher dicots	Capparaceae	<i>Capparis arborea</i>	brush caper berry		C		1/1
plants	higher dicots	Casuarinaceae	<i>Casuarina cunninghamiana</i>			C		1
plants	higher dicots	Casuarinaceae	<i>Allocasuarina littoralis</i>			C		6/6
plants	higher dicots	Casuarinaceae	<i>Allocasuarina</i> sp. (Shaw Island G.N.Batianoff+ 3360)			C		2/2
plants	higher dicots	Casuarinaceae	<i>Casuarina equisetifolia</i> subsp. <i>incana</i>			C		1/1
plants	higher dicots	Celastraceae	<i>Denhamia disperma</i>			C		1/1
plants	higher dicots	Chenopodiaceae	<i>Enchylaena tomentosa</i>			C		1/1
plants	higher dicots	Clusiaceae	<i>Hypericum gramineum</i>			C		1/1
plants	higher dicots	Combretaceae	<i>Macropteranthes fitzalanii</i>			C		4/4
plants	higher dicots	Dilleniaceae	<i>Hibbertia linearis</i> var. <i>floribunda</i>			C		1/1
plants	higher dicots	Dilleniaceae	<i>Hibbertia scandens</i>			C		1/1
plants	higher dicots	Droseraceae	<i>Drosera</i>			C		1
plants	higher dicots	Ebenaceae	<i>Diospyros geminata</i>	scaly ebony		C		2/2
plants	higher dicots	Ebenaceae	<i>Diospyros hebecarpa</i>			C		2/2
plants	higher dicots	Elaeocarpaceae	<i>Elaeocarpus grandis</i>	blue quandong		C		1/1
plants	higher dicots	Elaeocarpaceae	<i>Sloanea langii</i>			C		1/1
plants	higher dicots	Ericaceae	<i>Leucopogon leptospermoides</i>			C		2/2
plants	higher dicots	Ericaceae	<i>Leucopogon cuspidatus</i>			C		2/2
plants	higher dicots	Euphorbiaceae	<i>Ricinocarpus pinifolius</i>	wedding bush		C		2/2
plants	higher dicots	Euphorbiaceae	<i>Euphorbia bifida</i>			C		1/1
plants	higher dicots	Euphorbiaceae	<i>Homalanthus populifolius</i>			C		1
plants	higher dicots	Euphorbiaceae	<i>Macaranga involucrata</i> var. <i>mallotooides</i>			C		1/1
plants	higher dicots	Euphorbiaceae	<i>Claoxylon tenerifolium</i> subsp. <i>tenerifolium</i>			C		1/1
plants	higher dicots	Euphorbiaceae	<i>Tragia novae-hollandiae</i>	stinging-vine		C		1/1
plants	higher dicots	Fabaceae	<i>Mucuna gigantea</i>	burny bean		C		2/2
plants	higher dicots	Fabaceae	<i>Canavalia sericea</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Derris trifoliata</i>			C		2/2
plants	higher dicots	Fabaceae	<i>Millettia pinnata</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Isotropis filicaulis</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Indigofera trifoliata</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Tephrosia astragaloides</i>			C		2/2
plants	higher dicots	Fabaceae	<i>Tephrosia filipes</i> subsp. <i>filipes</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Sophora tomentosa</i> subsp. <i>australis</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Abrus precatorius</i> subsp. <i>precatorius</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Crotalaria montana</i> var. <i>angustifolia</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Tephrosia brachyodon</i> var. <i>brachyodon</i>			C		1/1
plants	higher dicots	Lecythidaceae	<i>Planchonia careya</i>	cockatoo apple		C		1/1

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plants	higher dicots	Loranthaceae	<i>Dendrophthoe glabrescens</i>			C		1/1
plants	higher dicots	Loranthaceae	<i>Amyema congener subsp. rotundifolia</i>			C		1/1
plants	higher dicots	Lythraceae	<i>Sonneratia alba</i>			C		2/2
plants	higher dicots	Malpighiaceae	<i>Stigmaphyllon australiense</i>			C		1/1
plants	higher dicots	Malpighiaceae	<i>Stigmaphyllon timoriense</i>			C		1/1
plants	higher dicots	Malvaceae	<i>Thespesia populnea</i>			C		1/1
plants	higher dicots	Malvaceae	<i>Sida sp. (Musselbrook M.B.Thomas+ MRS437)</i>			C		1/1
plants	higher dicots	Meliaceae	<i>Aglaia elaeagnoidea</i>			C		3/3
plants	higher dicots	Meliaceae	<i>Xylocarpus granatum</i>	cedar mangrove		C		1/1
plants	higher dicots	Meliaceae	<i>Dysoxylum rufum</i>			C		1/1
plants	higher dicots	Meliaceae	<i>Turraea pubescens</i>	native honeysuckle		C		2/2
plants	higher dicots	Memecylaceae	<i>Memecylon pauciflorum</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia polystachya</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia multisiliqua</i>			C		2/2
plants	higher dicots	Mimosaceae	<i>Entada phaseoloides</i>	matchbox bean		C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia fasciculifera</i>	scaly bark		C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia holosericea</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia crassicarpa</i>			C		2/2
plants	higher dicots	Mimosaceae	<i>Acacia flavescens</i>	toothed wattle		C		1
plants	higher dicots	Mimosaceae	<i>Falcataria toona</i>			C		2/2
plants	higher dicots	Mimosaceae	<i>Acacia salicina</i>	doolan		C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia humifusa</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia spirorbis subsp. solandri</i>			C		4/3
plants	higher dicots	Mimosaceae	<i>Acacia</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Leucaena leucocephala subsp. leucocephala</i>		Y	C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia simsii</i>			C		2/2
plants	higher dicots	Moraceae	<i>Ficus microcarpa</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus opposita</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus obliqua</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus rubiginosa forma rubiginosa</i>			C		2/2
plants	higher dicots	Moraceae	<i>Ficus rubiginosa forma glabrescens</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus virens var. virens</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus microcarpa var. hillii</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus hispida var. hispida</i>			C		1/1
plants	higher dicots	Myrsinaceae	<i>Tapeinosperma pseudojambosa</i>	tapeinosperma		C		1/1
plants	higher dicots	Myrsinaceae	<i>Aegiceras corniculatum</i>	river mangrove		C		1/1
plants	higher dicots	Myrsinaceae	<i>Myrsine variabilis</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Eucalyptus tereticornis subsp. tereticornis</i>			C		2/2
plants	higher dicots	Myrtaceae	<i>Corymbia tessellaris</i>	Moreton Bay ash		C		1
plants	higher dicots	Myrtaceae	<i>Rhodamnia pauciovulata</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Eucalyptus platyphylla</i>	poplar gum		C		1/1
plants	higher dicots	Myrtaceae	<i>Lophostemon confertus</i>	brush box		C		1/1
plants	higher dicots	Myrtaceae	<i>Corymbia clarksoniana</i>			C		3/2
plants	higher dicots	Myrtaceae	<i>Melaleuca hemisticta</i>			C		3/3
plants	higher dicots	Myrtaceae	<i>Acmena resa</i>	red Eungella satinash		C		1/1
plants	higher dicots	Myrtaceae	<i>Gossia bidwillii</i>			C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Myrtaceae	<i>Gossia pubiflora</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Eucalyptus exserta</i>	Queensland peppermint		C		5/4
plants	higher dicots	Myrtaceae	<i>Lithomyrtus obtusa</i>			C		2/2
plants	higher dicots	Myrtaceae	<i>Corymbia intermedia</i>	pink bloodwood		C		2/2
plants	higher dicots	Myrtaceae	<i>Melaleuca viminalis</i>			C		1
plants	higher dicots	Myrtaceae	<i>Rhodamnia spongiosa</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Eucalyptus drepanophylla</i>			C		1/1
plants	higher dicots	Nyctaginaceae	<i>Pisonia umbellifera</i>	birdlime tree		C		2/2
plants	higher dicots	Oleaceae	<i>Olea paniculata</i>			C		1/1
plants	higher dicots	Oleaceae	<i>Jasminum simplicifolium subsp. australiense</i>			C		1/1
plants	higher dicots	Oleaceae	<i>Chionanthus ramiflorus</i>	northern olive		C		2/1
plants	higher dicots	Orobanchaceae	<i>Buchnera urticifolia</i>			C		1/1
plants	higher dicots	Passifloraceae	<i>Passiflora aurantia var. aurantia</i>			C		2/2
plants	higher dicots	Phyllanthaceae	<i>Actephila plicata</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Phyllanthus lamprophyllus</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Cleistanthus dallachyanus</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Synostemon albiflorus</i>			C		2/1
plants	higher dicots	Phyllanthaceae	<i>Glochidion lobocarpum</i>			C		2/2
plants	higher dicots	Phyllanthaceae	<i>Antidesma parvifolium</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Phyllanthus virgatus</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Actephila latifolia</i>			C		1/1
plants	higher dicots	Phyllanthaceae	<i>Breynia oblongifolia</i>			C		1/1
plants	higher dicots	Picrodendraceae	<i>Dissiliaria indistincta</i>			C		4/4
plants	higher dicots	Pittosporaceae	<i>Pittosporum ferrugineum subsp. linifolium</i>			C		2/2
plants	higher dicots	Pittosporaceae	<i>Auranticarpa rhombifolia</i>			C		2/2
plants	higher dicots	Pittosporaceae	<i>Bursaria tenuifolia</i>			C		3/2
plants	higher dicots	Plantaginaceae	<i>Scoparia dulcis</i>	scoparia	Y			1/1
plants	higher dicots	Proteaceae	<i>Grevillea hilliana</i>			C		1/1
plants	higher dicots	Putranjivaceae	<i>Drypetes deplanchei</i>	grey boxwood		C		2/2
plants	higher dicots	Rhamnaceae	<i>Alphitonia excelsa</i>	soap tree		C		1
plants	higher dicots	Rhizophoraceae	<i>Bruguiera gymnorhiza</i>	large-fruited orange mangrove		C		1/1
plants	higher dicots	Rubiaceae	<i>Larsenaikia jardinei</i>			C		1/1
plants	higher dicots	Rubiaceae	<i>Psychotria poliostemma</i>			C		1/1
plants	higher dicots	Rubiaceae	<i>Spermacoce brachystema</i>			C		1/1
plants	higher dicots	Rubiaceae	<i>Timonius timon var. timon</i>			C		3/3
plants	higher dicots	Rubiaceae	<i>Psydrax odorata forma australiana</i>			C		1/1
plants	higher dicots	Rubiaceae	<i>Psydrax odorata subsp. australiana</i>			C		3/3
plants	higher dicots	Rubiaceae	<i>Pavetta australiensis var. australiensis</i>			C		1/1
plants	higher dicots	Rubiaceae	<i>Psychotria sp. (Shute Harbour L.J.Webb+ 7916)</i>			C		1
plants	higher dicots	Rubiaceae	<i>Nauclea orientalis</i>	Leichhardt tree		C		1/1
plants	higher dicots	Rubiaceae	<i>Psydrax odorata</i>			C		1
plants	higher dicots	Rubiaceae	<i>Aidia racemosa</i>			C		1/1
plants	higher dicots	Rutaceae	<i>Acronychia laevis</i>	glossy acronychia		C		2/2
plants	higher dicots	Rutaceae	<i>Coatesia paniculata</i>			C		1/1
plants	higher dicots	Rutaceae	<i>Bosistoa medicinalis</i>			C		2/2
plants	higher dicots	Rutaceae	<i>Glycosmis trifoliata</i>			C		1/1

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plants	higher dicots	Rutaceae	<i>Flindersia schottiana</i>	bumpy ash		C		1/1
plants	higher dicots	Rutaceae	<i>Dinosperma melanophloia</i>			C		1/1
plants	higher dicots	Rutaceae	<i>Bosistoa pentacocca subsp. connaricarpa</i>			C		2/2
plants	higher dicots	Salicaceae	<i>Homalium sp. (South Molle Island J.A.Gresty AQ208995)</i>			C		3/2
plants	higher dicots	Salicaceae	<i>Scolopia braunii</i>	flintwood		C		1/1
plants	higher dicots	Santalaceae	<i>Anthobolus filifolius</i>			C		1/1
plants	higher dicots	Santalaceae	<i>Exocarpos cupressiformis</i>	native cherry		C		2/2
plants	higher dicots	Sapindaceae	<i>Arytera divaricata</i>	coogera		C		2/2
plants	higher dicots	Sapindaceae	<i>Ganophyllum falcatum</i>			C		1/1
plants	higher dicots	Sapindaceae	<i>Lepiderema punctulata</i>			C		2/2
plants	higher dicots	Sapindaceae	<i>Cupaniopsis wadsworthii</i>			C		1/1
plants	higher dicots	Sapindaceae	<i>Atalaya rigida</i>			C		3/3
plants	higher dicots	Sapindaceae	<i>Harpullia hillii</i>			C		2/2
plants	higher dicots	Sapindaceae	<i>Cupaniopsis anacardioides</i>	tuckeroo		C		2/2
plants	higher dicots	Sapindaceae	<i>Elattostachys bidwillii</i>			C		2/2
plants	higher dicots	Sapotaceae	<i>Mimusops elengi</i>			C		3/2
plants	higher dicots	Sapotaceae	<i>Planchonella chartacea</i>			C		1/1
plants	higher dicots	Sapotaceae	<i>Planchonella pohlmaniana</i>			C		2/2
plants	higher dicots	Sapotaceae	<i>Planchonella myrsinodendron</i>			C		1/1
plants	higher dicots	Sapotaceae	<i>Planchonella cotinifolia var. cotinifolia</i>			C		1/1
plants	higher dicots	Scrophulariaceae	<i>Myoporum boninense subsp. australe</i>			C		1/1
plants	higher dicots	Sparrmanniaceae	<i>Grewia oxyphylla</i>			C		2/2
plants	higher dicots	Sterculiaceae	<i>Argyrodendron sp. (Whitsundays W.J.McDonald+ 5831)</i>			C		2/2
plants	higher dicots	Sterculiaceae	<i>Argyrodendron polyandrum</i>	brown tulip oak		C		1/1
plants	higher dicots	Sterculiaceae	<i>Brachychiton australis</i>	broad-leaved bottle tree		C		1/1
plants	higher dicots	Sterculiaceae	<i>Heritiera littoralis</i>			C		1/1
plants	higher dicots	Stylidiaceae	<i>Stylidium eriorhizum</i>			C		1/1
plants	higher dicots	Thymelaeaceae	<i>Pimelea cornucopiae</i>			C		1/1
plants	higher dicots	Ulmaceae	<i>Celtis philippensis</i>			C		3/3
plants	higher dicots	Ulmaceae	<i>Trema orientalis</i>	tree peach		C		1/1
plants	higher dicots	Urticaceae	<i>Dendrocnide moroides</i>	Gympie stinger		C		1/1
plants	higher dicots	Vitaceae	<i>Clematicissus opaca</i>			C		2/1
plants	higher dicots	Vitaceae	<i>Cissus cardiophylla</i>			C		2/2
plants	higher dicots	Vitaceae	<i>Tetrastigma nitens</i>	shining grape		C		1/1
plants	higher dicots	Vitaceae	<i>Cissus adnata</i>			C		1/1
plants	liverworts	Frullaniaceae	<i>Frullania</i>			C		1/1
plants	liverworts	Lejeuneaceae	<i>Acrolejeunea securifolia</i>			C		3/3
plants	lower dicots	Annonaceae	<i>Melodorum leichhardtii</i>			C		1/1
plants	lower dicots	Annonaceae	<i>Polyalthia nitidissima</i>	polyalthia		C		1
plants	lower dicots	Apocynaceae	<i>Ochrosia elliptica</i>	northern ochrosia		C		2/2
plants	lower dicots	Apocynaceae	<i>Parsonsia velutina</i>	hairy silkpod		C		1/1
plants	lower dicots	Apocynaceae	<i>Wrightia versicolor</i>			C		1/1
plants	lower dicots	Apocynaceae	<i>Tabernaemontana orientalis</i>			C		2/1
plants	lower dicots	Apocynaceae	<i>Alstonia scholaris</i>	white cheesewood		C		2/2
plants	lower dicots	Apocynaceae	<i>Alyxia spicata</i>			C		4/2

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plants	lower dicots	Apocynaceae	<i>Carissa ovata</i>	currantbush		C		1/1
plants	lower dicots	Apocynaceae	<i>Gymnanthera oblonga</i>			C		2/2
plants	lower dicots	Aristolochiaceae	<i>Aristolochia pubera</i> var. <i>pubera</i>			C		1/1
plants	lower dicots	Boraginaceae	<i>Heliotropium sarmentosum</i>			C		1/1
plants	lower dicots	Boraginaceae	<i>Heliotropium vagum</i>			C		1/1
plants	lower dicots	Boraginaceae	<i>Cordia subcordata</i>			C		1/1
plants	lower dicots	Convolvulaceae	<i>Distimake quinquefolius</i>		Y			1/1
plants	lower dicots	Convolvulaceae	<i>Ipomoea cairica</i>		Y			1/1
plants	lower dicots	Convolvulaceae	<i>Ipomoea violacea</i>			C		1/1
plants	lower dicots	Convolvulaceae	<i>Ipomoea abrupta</i>			C		1/1
plants	lower dicots	Lamiaceae	<i>Anisomeles moschata</i>			C		1/1
plants	lower dicots	Lamiaceae	<i>Vitex acuminata</i>			C		1/1
plants	lower dicots	Lamiaceae	<i>Premna serratifolia</i>			C		1/1
plants	lower dicots	Lamiaceae	<i>Plectranthus diversus</i>			C		2/2
plants	lower dicots	Lamiaceae	<i>Vitex trifolia</i> var. <i>trifolia</i>			C		1/1
plants	lower dicots	Lamiaceae	<i>Salvia coccinea</i>	red salvia	Y			1/1
plants	lower dicots	Lamiaceae	<i>Plectranthus parviflorus</i>			C		1/1
plants	lower dicots	Lauraceae	<i>Litsea glutinosa</i>			C		1
plants	lower dicots	Lauraceae	<i>Cassytha filiformis</i>	dodder laurel		C		1/1
plants	lower dicots	Lauraceae	<i>Cryptocarya bidwillii</i>	yellow laurel		C		1/1
plants	lower dicots	Lauraceae	<i>Cryptocarya hypospodia</i>	north Queensland purple laurel		C		2/2
plants	lower dicots	Lauraceae	<i>Beilschmiedia obtusifolia</i>	hard bolly gum		C		2/2
plants	lower dicots	Lauraceae	<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>			C		1/1
plants	lower dicots	Menispermaceae	<i>Tinospora smilacina</i>	snakevine		C		1/1
plants	lower dicots	Menispermaceae	<i>Pachygone ovata</i>			C		2/2
plants	lower dicots	Monimiaceae	<i>Wilkiea macrophylla</i>	large-leaved wilkiea		C		1/1
plants	lower dicots	Myristicaceae	<i>Myristica globosa</i> subsp. <i>muelleri</i>	native nutmeg		C		1/1
plants	lower dicots	Solanaceae	<i>Solanum lycopersicum</i> var. <i>cerasiforme</i>		Y			1/1
plants	lower dicots	Verbenaceae	<i>Lantana camara</i>	lantana	Y			1
plants	monocots	Araceae	<i>Alocasia brisbanensis</i>			C		2/2
plants	monocots	Arecaceae	<i>Archontophoenix alexandrae</i>	Alexandra palm		C		1/1
plants	monocots	Arecaceae	<i>Calamus australis</i>	hairy mary		C		1/1
plants	monocots	Arecaceae	<i>Ptychosperma elegans</i>	solitaire palm		C		1/1
plants	monocots	Commelinaceae	<i>Commelina ensifolia</i>	scurvy grass		C		1/1
plants	monocots	Commelinaceae	<i>Pollia macrophylla</i>			C		1/1
plants	monocots	Cymodoceaceae	<i>Cymodocea serrulata</i>			C		1/1
plants	monocots	Cymodoceaceae	<i>Halodule uninervis</i>			C		1/1
plants	monocots	Cymodoceaceae	<i>Syringodium isoetifolium</i>			C		1/1
plants	monocots	Cyperaceae	<i>Trachystylis stradbokensis</i>			C		1/1
plants	monocots	Cyperaceae	<i>Rhynchospora pterochaeta</i>			C		1/1
plants	monocots	Cyperaceae	<i>Cyperus tetracarpus</i>			C		1/1
plants	monocots	Cyperaceae	<i>Cyperus pedunculatus</i>			C		1/1
plants	monocots	Cyperaceae	<i>Fimbristylis dichotoma</i>	common fringe-rush		C		1/1
plants	monocots	Cyperaceae	<i>Fimbristylis</i>			C		1/1
plants	monocots	Cyperaceae	<i>Gahnia aspera</i>			C		3/2
plants	monocots	Cyperaceae	<i>Cyperus enervis</i>			C		1/1

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plants	monocots	Cyperaceae	<i>Schoenus sparteus</i>			C		1/1
plants	monocots	Cyperaceae	<i>Abildgaardia ovata</i>			C		1/1
plants	monocots	Cyperaceae	<i>Scleria sphacelata</i>			C		1/1
plants	monocots	Dioscoreaceae	<i>Dioscorea transversa</i>	native yam		C		4/4
plants	monocots	Flagellariaceae	<i>Flagellaria indica</i>	whip vine		C		1/1
plants	monocots	Hemerocallidaceae	<i>Dianella caerulea var. vannata</i>			C		1/1
plants	monocots	Laxmanniaceae	<i>Eustrephus latifolius</i>	wombat berry		C		2/1
plants	monocots	Laxmanniaceae	<i>Cordyline murchisoniae</i>			C		1/1
plants	monocots	Laxmanniaceae	<i>Lomandra confertifolia subsp. pallida</i>			C		2/1
plants	monocots	Laxmanniaceae	<i>Lomandra multiflora subsp. multiflora</i>			C		2/2
plants	monocots	Laxmanniaceae	<i>Cordyline manners-suttoniae</i>			C		3/3
plants	monocots	Orchidaceae	<i>Geodorum densiflorum</i>	pink nodding orchid		C		1
plants	monocots	Poaceae	<i>Panicum decompositum var. decompositum</i>			C		1/1
plants	monocots	Poaceae	<i>Perotis rara</i>	comet grass		C		1/1
plants	monocots	Poaceae	<i>Melinis repens</i>	red natal grass	Y			1/1
plants	monocots	Poaceae	<i>Lepturus repens</i>	stalky grass		C		1/1
plants	monocots	Poaceae	<i>Sehima nervosum</i>			C		1/1
plants	monocots	Poaceae	<i>Setaria surgens</i>			C		1/1
plants	monocots	Poaceae	<i>Mnesithea formosa</i>			C		1/1
plants	monocots	Poaceae	<i>Spinifex sericeus</i>	beach spinifex		C		2/2
plants	monocots	Poaceae	<i>Chrysopogon fallax</i>			C		1/1
plants	monocots	Poaceae	<i>Eragrostis sororia</i>			C		1/1
plants	monocots	Poaceae	<i>Eriachne pallescens</i>			C		1/1
plants	monocots	Poaceae	<i>Eriachne triodioides</i>			C		1/1
plants	monocots	Poaceae	<i>Tripogon loliiformis</i>	five minute grass		C		1/1
plants	monocots	Poaceae	<i>Vacoparis laxiflorum</i>			C		1/1
plants	monocots	Poaceae	<i>Eragrostis interrupta</i>			C		1/1
plants	monocots	Poaceae	<i>Oplismenus compositus</i>			C		3/3
plants	monocots	Poaceae	<i>Schizachyrium fragile</i>	firegrass		C		1/1
plants	monocots	Poaceae	<i>Ancistrachne uncinulata</i>	hooky grass		C		1/1
plants	monocots	Poaceae	<i>Eragrostis spartinooides</i>			C		1/1
plants	monocots	Poaceae	<i>Schizachyrium pseudeulalia</i>			C		1/1
plants	monocots	Poaceae	<i>Sorghum nitidum forma aristatum</i>			C		1/1
plants	monocots	Poaceae	<i>Aristida holathera var. holathera</i>			C		1/1
plants	monocots	Poaceae	<i>Eriachne pallescens var. gracilis</i>			C		1/1
plants	monocots	Poaceae	<i>Eriachne pallescens var. pallescens</i>			C		2/2
plants	monocots	Smilacaceae	<i>Smilax glycyphylla</i>	sweet sarsaparilla		C		1/1
plants	monocots	Taccaceae	<i>Tacca leontopetaloides</i>			C		1
plants	monocots	Zingiberaceae	<i>Alpinia caerulea</i>	wild ginger		C		1/1
plants	mosses	Calympereaceae	<i>Calymperes graeffeanum</i>			C		3/3
plants	mosses	Calympereaceae	<i>Calymperes tenerum</i>			C		1/1
plants	mosses	Entodontaceae	<i>Entodon plicatus</i>			C		2/2
plants	mosses	Fissidentaceae	<i>Fissidens oblongifolius var. oblongifolius</i>			C		1/1
plants	mosses	Hypnaceae	<i>Hypnum cupressiforme</i>			C		1/1
plants	mosses	Hypnaceae	<i>Ectropothecium</i>			C		2/2
plants	mosses	Lembophyllaceae	<i>Camptochaete excavata</i>			C		2/2

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plants	mosses	Leucobryaceae	<i>Leucobryum candidum</i>			C		1/1
plants	mosses	Leucobryaceae	<i>Leucobryum aduncum</i> var. <i>scalare</i>			C		1/1
plants	mosses	Neckeraceae	<i>Neckeropsis cyclophylla</i> (Muell.Hal.) <i>S.Olsson, Enroth &amp; D.Quandt</i>			C		1/1
plants	mosses	Neckeraceae	<i>Neckeropsis lepineana</i>			C		2/2
plants	mosses	Orthotrichaceae	<i>Macromitrium ligulaefolium</i>			C		1/1
plants	mosses	Orthotrichaceae	<i>Macromitrium exsertum</i>			C		1/1
plants	mosses	Orthotrichaceae	<i>Macromitrium repandum</i>			C		1/1
plants	mosses	Orthotrichaceae	<i>Macromitrium</i>			C		1/1
plants	mosses	Pottiaceae	<i>Hyophila involuta</i>			C		1/1
plants	mosses	Pterobryaceae	<i>Muellerobryum whiteleggei</i>			C		3/3
plants	mosses	Ptychomniaceae	<i>Garovaglia elegans</i> subsp. <i>dietrichiae</i>			C		1/1
plants	mosses	Racopilaceae	<i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>			C		2/2
plants	uncertain	Indet.	<i>Indet.</i>			C		2
plants		Macarthuriaceae	<i>Macarthuria neocambrica</i>			C		1/1
plants		Pylaisiadelphaceae	<i>Isopterygium albescens</i>			C		2/2
plants		Pylaisiadelphaceae	<i>Taxithelium instratum</i>			C		2/2
protists	green algae	Chlorophyceae	<i>Penicillus nodulosus</i>			C		1/1
protists	red algae	Rhodophyceae	<i>Coelarthrum</i>			C		1/1

#### CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ( ).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*. The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).

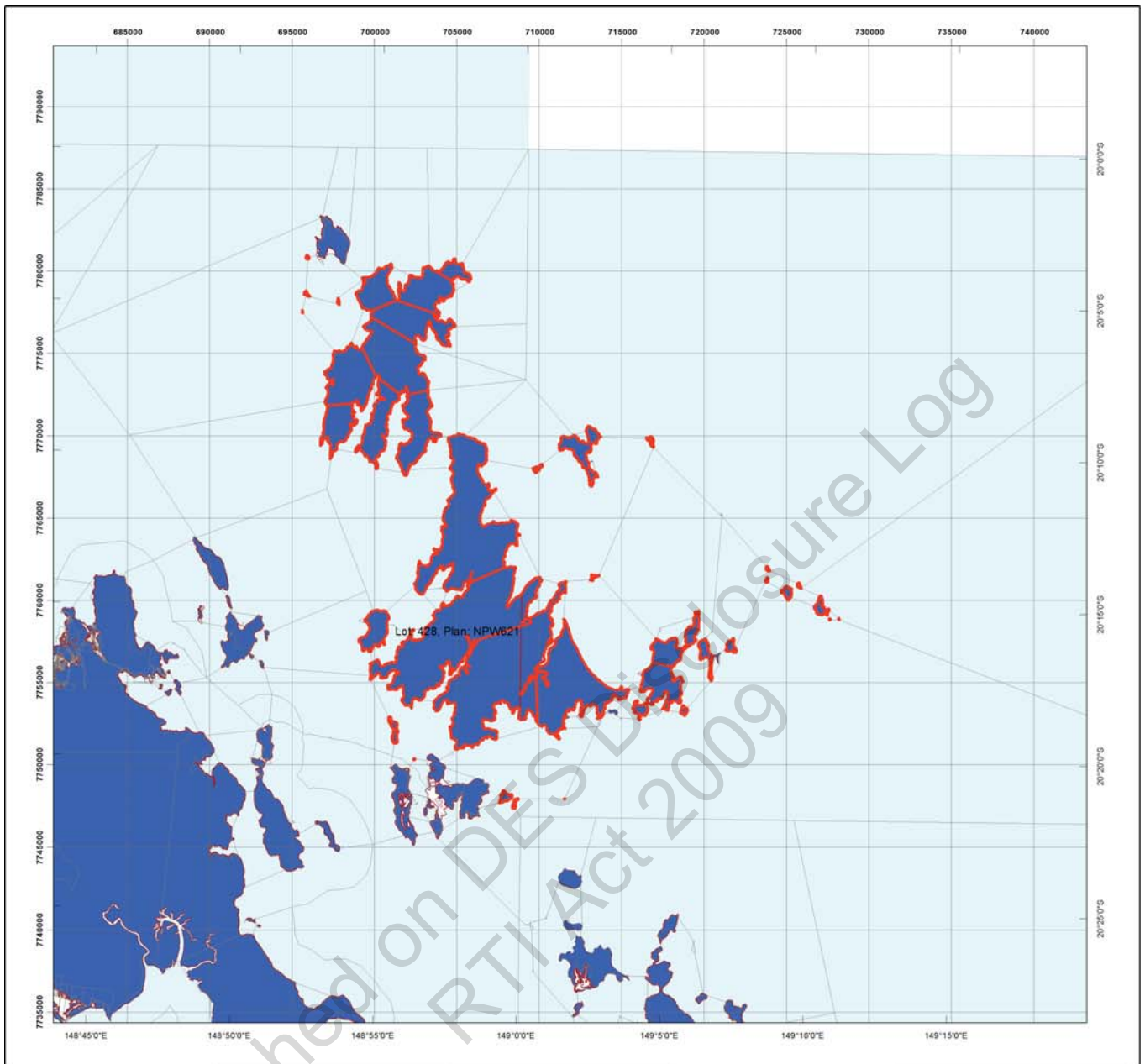
This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



# Regulated vegetation management mapping

Published on DES Disclosure Log  
RTI Act 2009



### Regulated Vegetation Management Map

**Legend**

- Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Area not categorised
- Cadastral line
- Property boundaries shown as provided as a locational aid only



**Disclaimer:**

While every care is taken to ensure the accuracy of this product, the Department of Natural Resources, Mines and Energy makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) or contact the Department of Natural Resources, Mines and Energy.

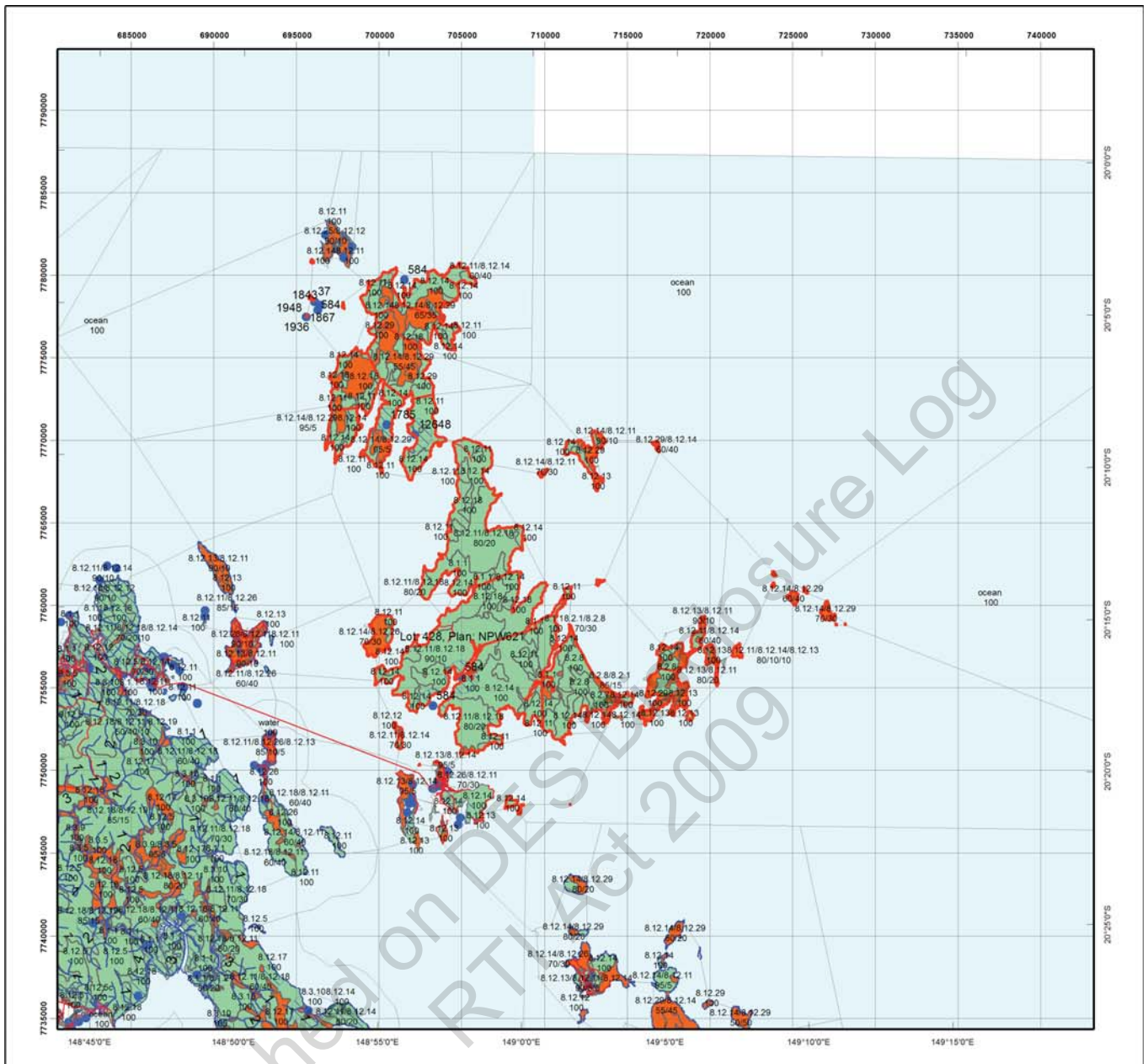
Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



This product is projected into:  
 GDA 1994 MGA Zone 55

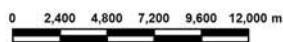
© The State of Queensland (Department of Natural Resources, Mines and Energy), 2018



## Vegetation Management Supporting Map

### Legend

- Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category A or B area under Section 20AH  
These areas are edged in yellow and filled with the remnant RE Status
- Category C area containing endangered regional ecosystems
- Category C area containing of concern regional ecosystems
- Category C area that is a least concern regional ecosystem
- Category C area under Section 20AI  
These areas are edged in purple and filled with the remnant RE Status
- Non Remnant
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map  
(Stream order shown as black number against stream where available)
- Roads
- National Parks, State Forest and other reserves
- Cadastral line
- Property boundaries shown are provided as a locational aid only



This product is projected into:  
 GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

**Disclaimer:**  
 While every care is taken to ensure the accuracy of this product, the Department of Natural Resources, Mines and Energy makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) or contact the Department of Natural Resources, Mines and Energy.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>



# Vegetation Management Act 1999 - Extract from the essential habitat database

Essential habitat is required for assessment under the:

- State Development Assessment Provisions - State Code 16: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the *Planning Act 2016*, and
- Accepted development vegetation clearing codes made under the *Vegetation Management Act 1999*

Essential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s on the accompanying essential habitat map.

This report identifies essential habitat in Category A, B and Category C areas.

The numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.

Essential habitat is compiled from a combination of species habitat models and buffered species records.

The Department of Natural Resources, Mines and Energy website (<http://www.dnrme.qld.gov.au>) has more information on how the layer is applied under the State Development Assessment Provisions - State Code 16: Native vegetation clearing and the *Vegetation Management Act 1999*.

Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated.

Essential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

Protected wildlife includes endangered, vulnerable or near-threatened native wildlife prescribed under the *Nature Conservation Act 1992*.

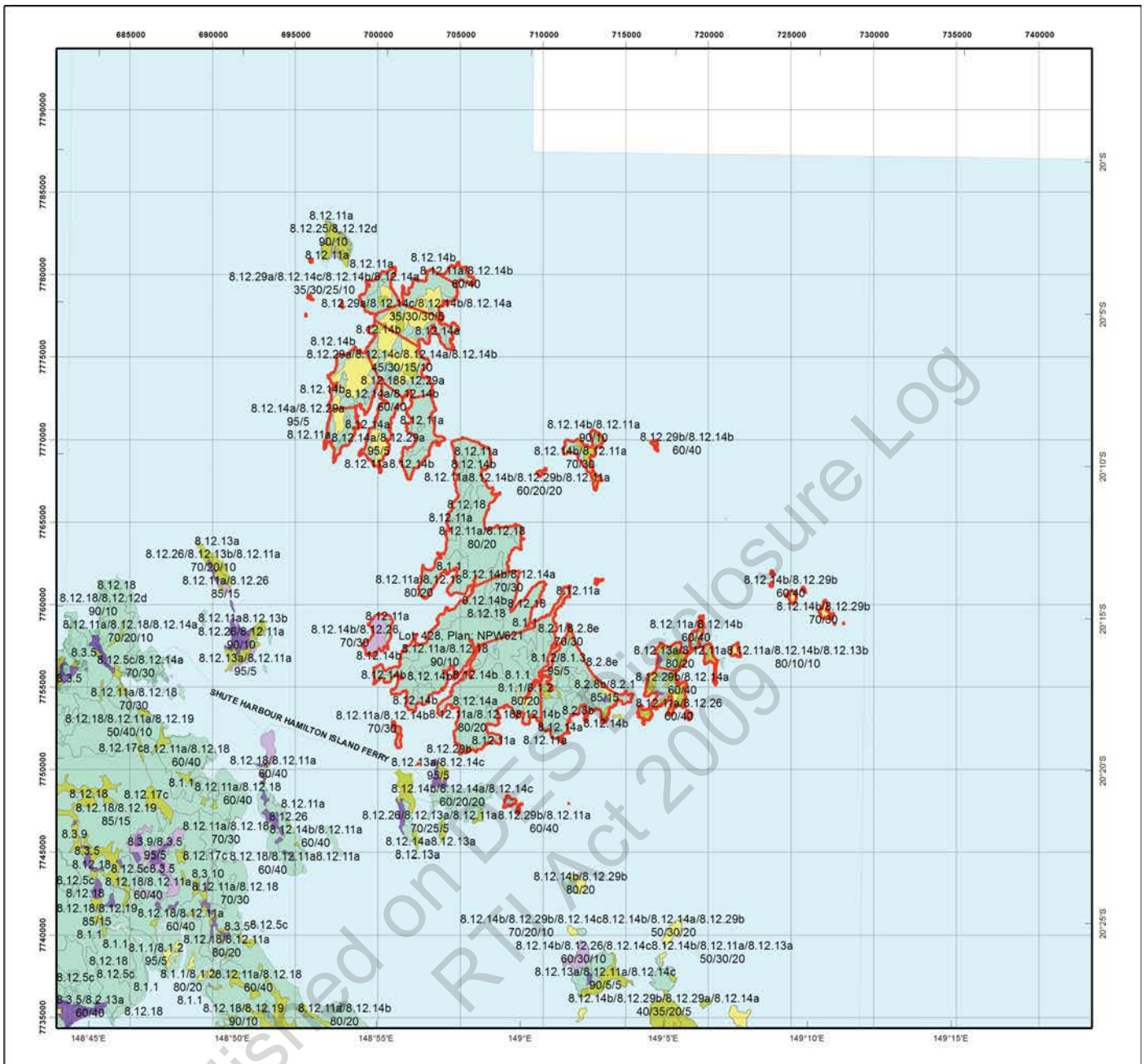
## Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
584	<i>Crocodylus porosus</i>	estuarine crocodile	V	Estuaries and major rivers, billabongs and swamps in dry season, freshwater swamps in wet season, occasionally found in open sea, also in dune swale swamps and dams; mostly within 40-50km of coastline (some breeding populations up to 100km from sea). Nest sites vegetated areas (preference for Melaleuca swamp forest with <i>Thoracostachyum</i> or <i>Scleria</i> sedgeswamp &/or <i>Stenoclaena</i> fern) near permanent freshwater (<100-200m), often on north-west banks, prime areas associated with productive deepwater estuaries; will also use marginal sites, e.g. grassy areas ( <i>Imperata</i> , <i>Ischaemum</i> , <i>Themeda</i> , <i>Sorghum</i> ) near forest edge or with sparse eucalypt, riverbank/fringe forest ( <i>Melaleuca</i> , <i>Corypha</i> , <i>Acacia</i> ), mangrove fringe, salt meadow behind mangrove, and sparse short (<40cm) sedgeland/swamp.	Sea level to 100m.	None	Near and in waterbodies.
1785	<i>Geophaps scripta scripta</i>	squatter pigeon (southern subsp.)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.
12648	<i>Brachychiton compactus</i>	Whitsunday bottle tree	NT	semi-evergreen vine thicket; notophyll or microphyll vine forest	0 to 300 m	lithosols derived from granite	hill slope or ridge often rocky

Label	Regional Ecosystem (mandatory unless otherwise specified)
584	All regional ecosystems within the stream/wetland buffer as determined by VMA code.
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.8, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9.10.5, 12.9.10.7, 12.9.10.8, 12.9.10.12, 12.9.10.13, 12.9.10.25, 12.9.10.26, 12.9.10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10
12648	8.12.11, 8.12.18

# Regional ecosystems mapping

Published on DES Disclosure Log  
RTI Act 2009



### Pre-clearing Regional Ecosystems

#### Biodiversity Status

- Lot and Plan
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries

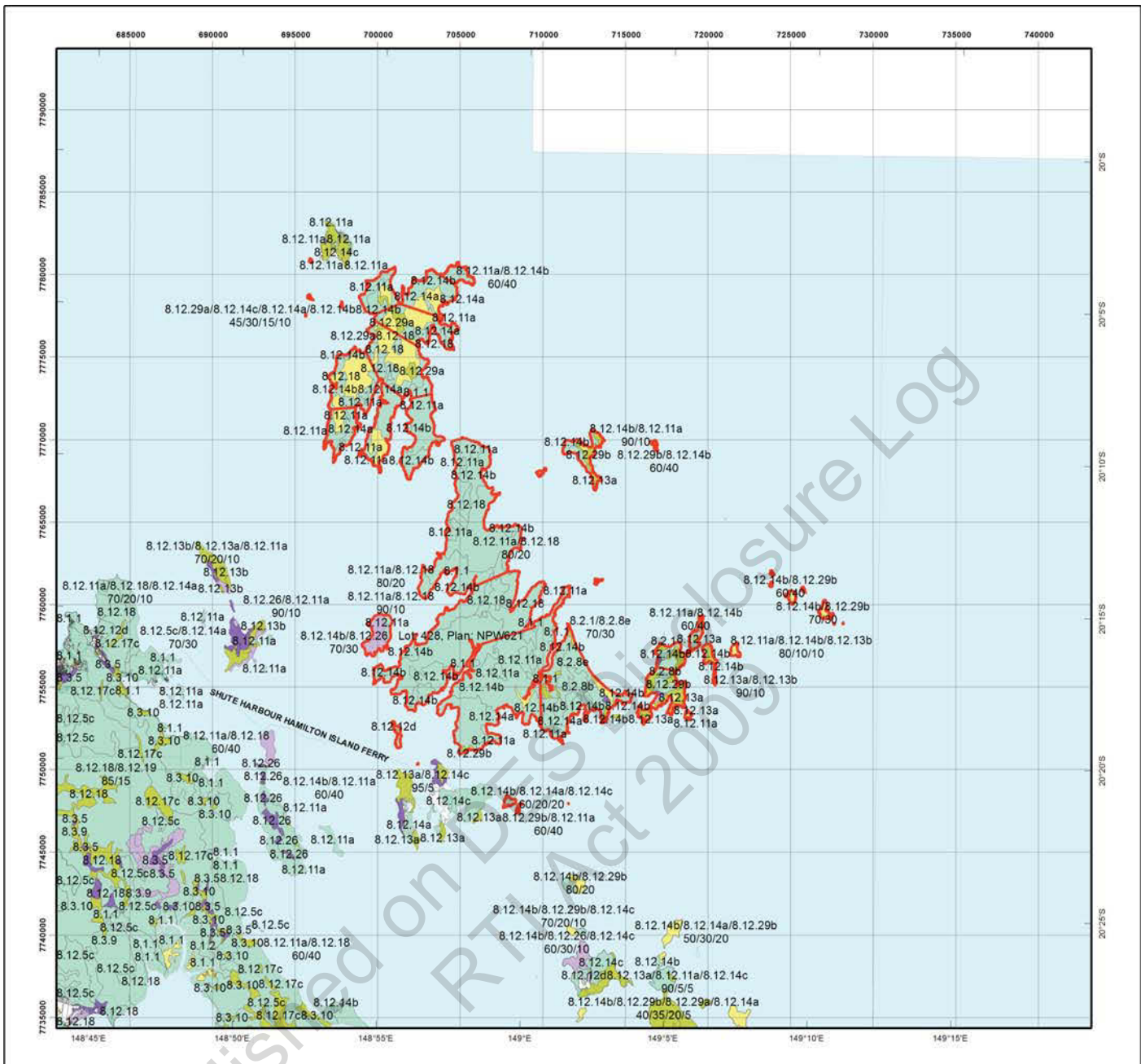


This product is projected into GDA 1994 MGA Zone 55

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

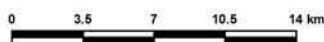
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.



### Remnant 2015 Regional Ecosystems

#### Biodiversity Status

- Lot and Plan
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 55

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community - the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

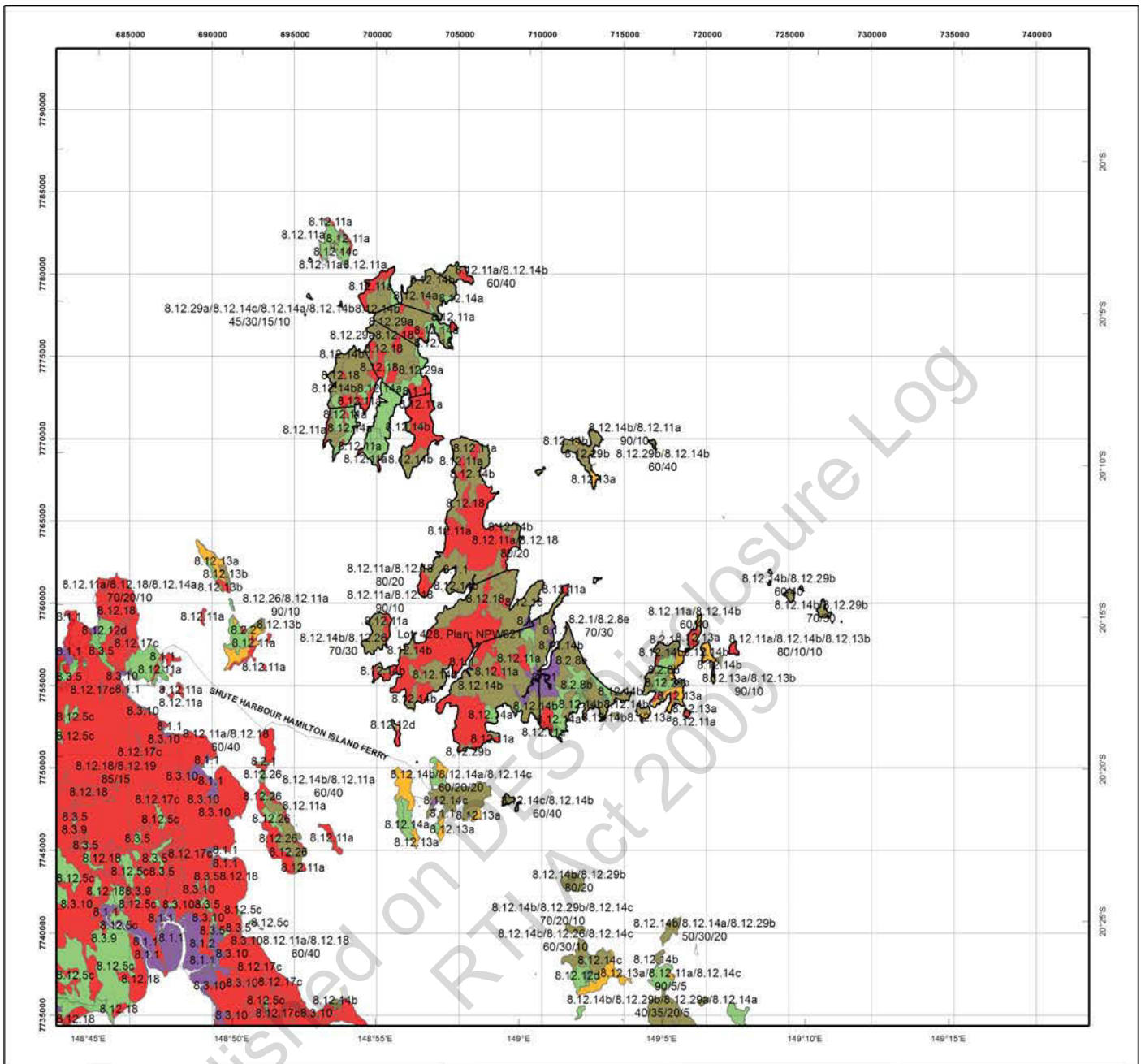
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

# Broad vegetation groups mapping

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RTI Act 2009

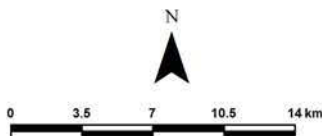




**Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups**

**Broad Vegetation Groups  
 BVG5M Description (BVG1M codes)**

- Lot and Plan
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 55

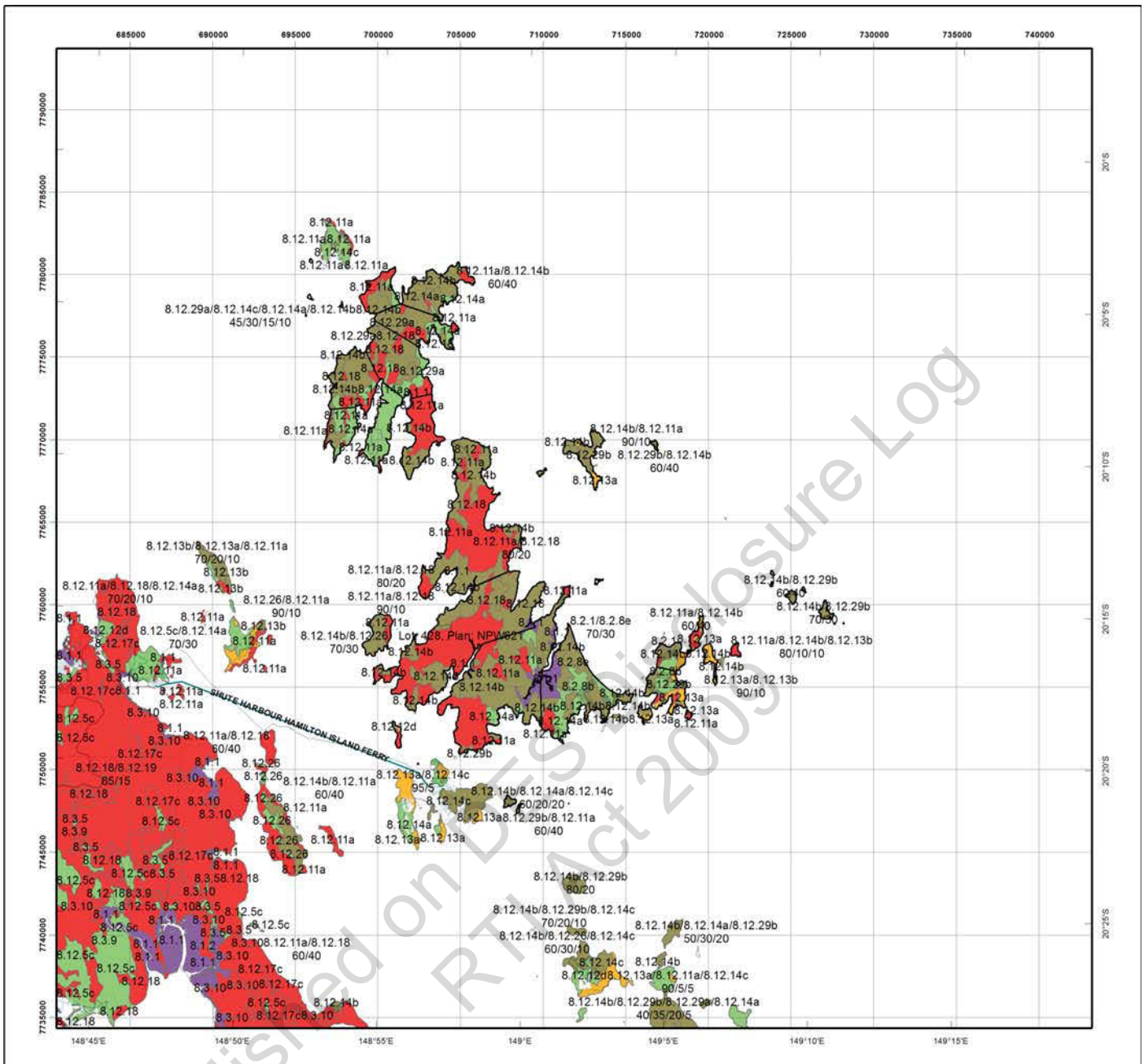
Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of line work is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

The label consists of 3 components: the bioregion, land zone, and vegetation community - the dominant canopy species, e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.



### Remnant 2015 Regional Ecosystems coloured by Broad Vegetation Groups

#### Broad Vegetation Groups BVG5M Description (BVG1M codes)

- Lot and Plan
- 1. Rainforests and scrubs (1-7b)
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- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
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- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 55

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

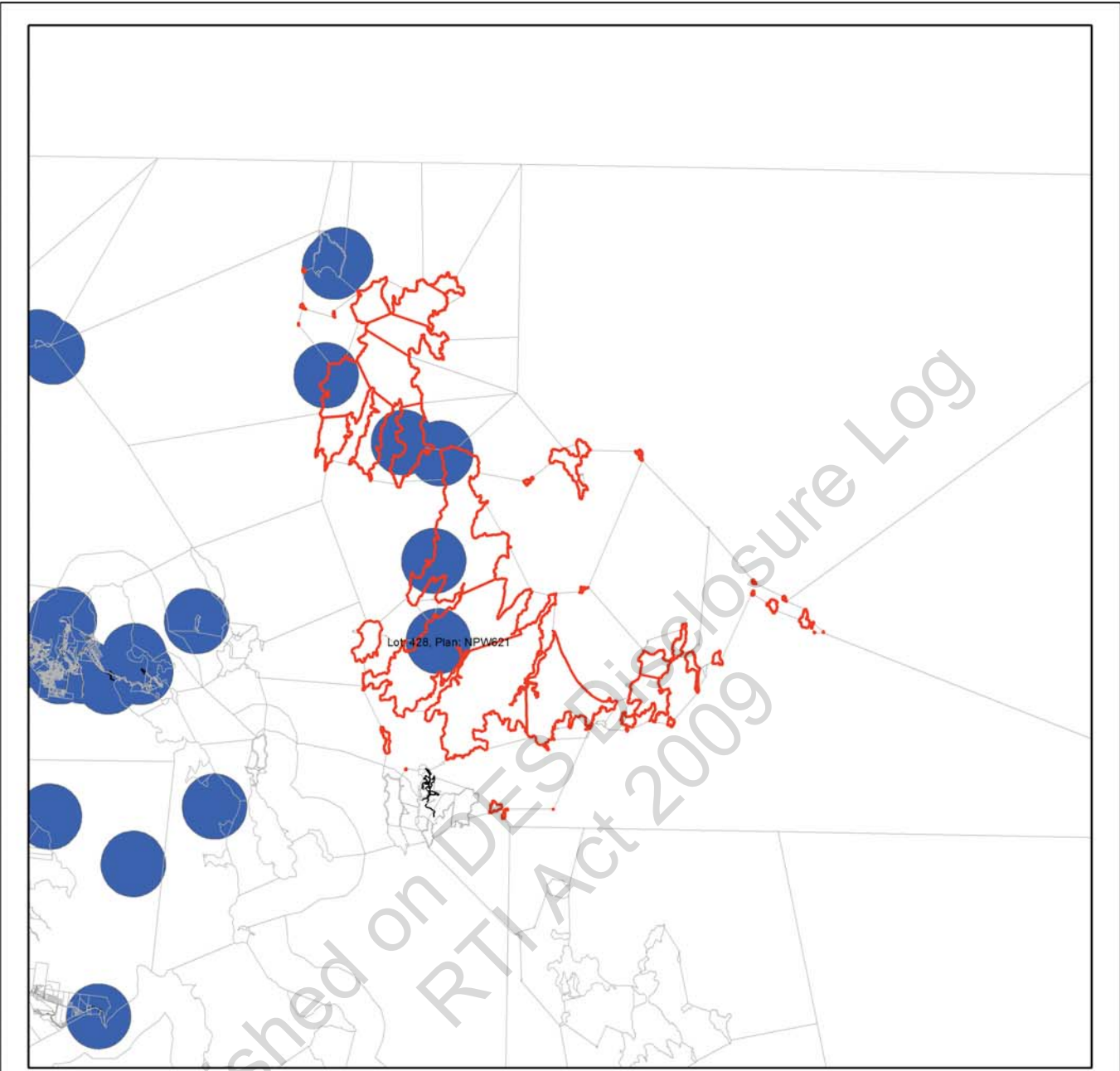
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

# Protected plants flora survey trigger mapping

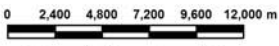
Published on DES Disclosure Log  
RTI Act 2009



**Protected Plants Flora Survey Trigger Map**

**Legend**

- Lot and Plan
- High risk area
- Cadastral line
- Property boundaries shown are provided as a locational aid only
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:  
 GDA 1994 Queensland Albers

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at [palm@ehp.qld.gov.au](mailto:palm@ehp.qld.gov.au)

**Disclaimer:**  
 While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.



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RTI Act 2009

# Appendices

Appendix A  
Whitsunday Island Ecotourism Feasibility Study  
Environmental Constraints Heat Map

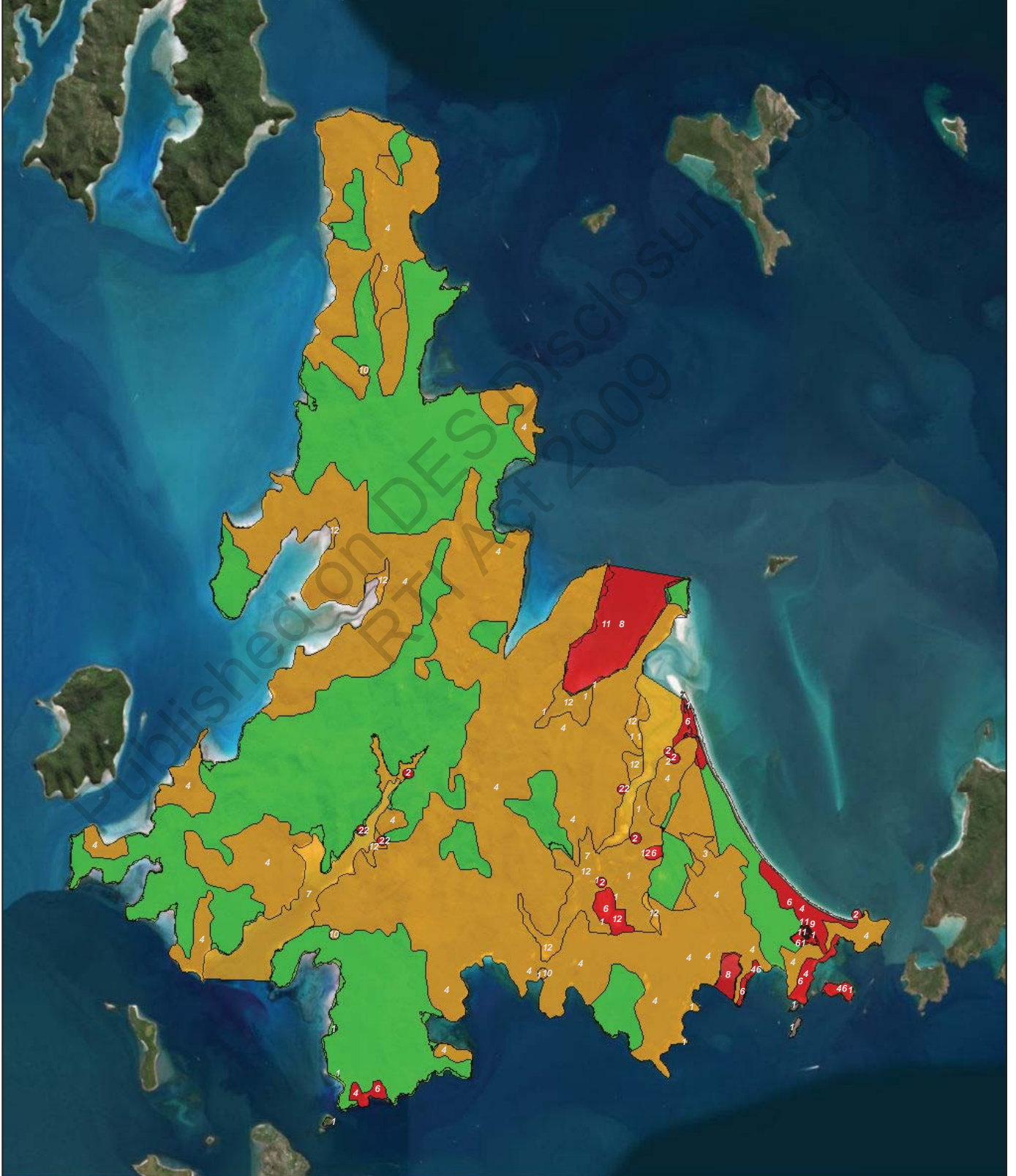
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Label	Dataset	Rating
1	Coastal Sheathtail Bat Habitat	Medium
2	Cultural Heritage Sites 100m Buffer	High
3	Ghost Bat Habitat	Medium
4	Koala Habitat	Medium
5	RE Least Concern	Low
6	RE Of Concern	High
7	Saltwater Crocodile Habitat	Medium
8	Sensitive Areas QPWS	High
9	Sensitive Areas WPOM	High
10	Swamp Orchid 100m Buffer	Medium
11	Tongue Bay Dugong Habitat	High
12	Water Mouse Habitat	Medium

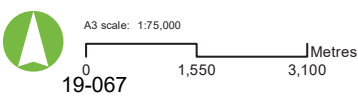
**Legend**

**Environmental Constraints Heat Map**

- High - known constraints exist
- Medium - potential constraints exist
- Low - no specific constraints exist



Author: ZombaRA P:\GIS\Projects\503504\_Whitsunday\_Island\Heat\_Map.mxd 13/08/2018 16:35



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Coordinate System: GDA 1994 MGA Zone 55

**Whitsunday Island Ecotourism Feasibility Study**

**Figure: Environmental Constraints Heat Map**  
Page 183 of 225

## Heat map criteria

Map Identifier	Rating	Constraint	Data source
1	Medium	Coastal Sheathtail Bat Habitat	HAT 1m buffer
2	High	Cultural Heritage Sites 100m Buffer	DATSIP
3	Medium	Ghost Bat Habitat	QPWS consultation/aerial imagery
4	Medium	Koala Habitat	8.12.14a, 8.12.14b, 8.2.8b
5	Low	RE Least Concern	RE Least Concern
6	High	RE Of Concern	RE Of Concern
7	Medium	Saltwater Crocodile Habitat	Mapped from aerial and some RE
8	High	Sensitive Areas QPWS	QPWS consultation
9	High	Sensitive Areas WPOM	RE 8.2.2, 8.2.7e, 8.2.9
10	Medium	Swamp Orchid 100m Buffer	Mackay SGAP
11	High	Tongue Bay Dugong Habitat	QPWS consultation
12	Medium	Water Mouse Habitat	8.1.1, 8.1.2, 8.1.3
13	High	Migratory Shorebirds	WPOM/Key Values
14	High	Protected Whitsundays Plan of Management	WPOM Map

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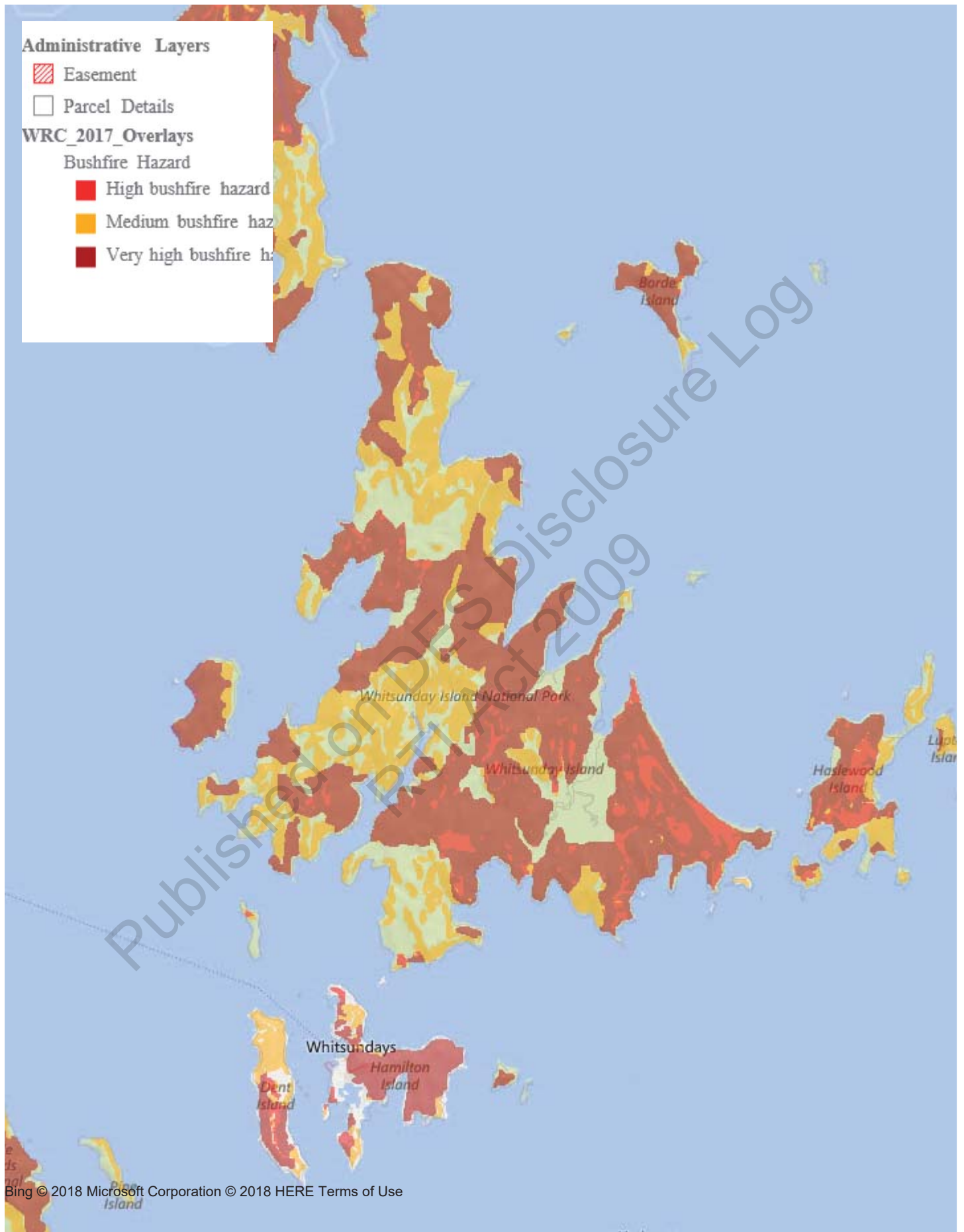
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to life*

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Swaziland, Tanzania, Thailand, Uganda,  
United Arab Emirates, Vietnam.

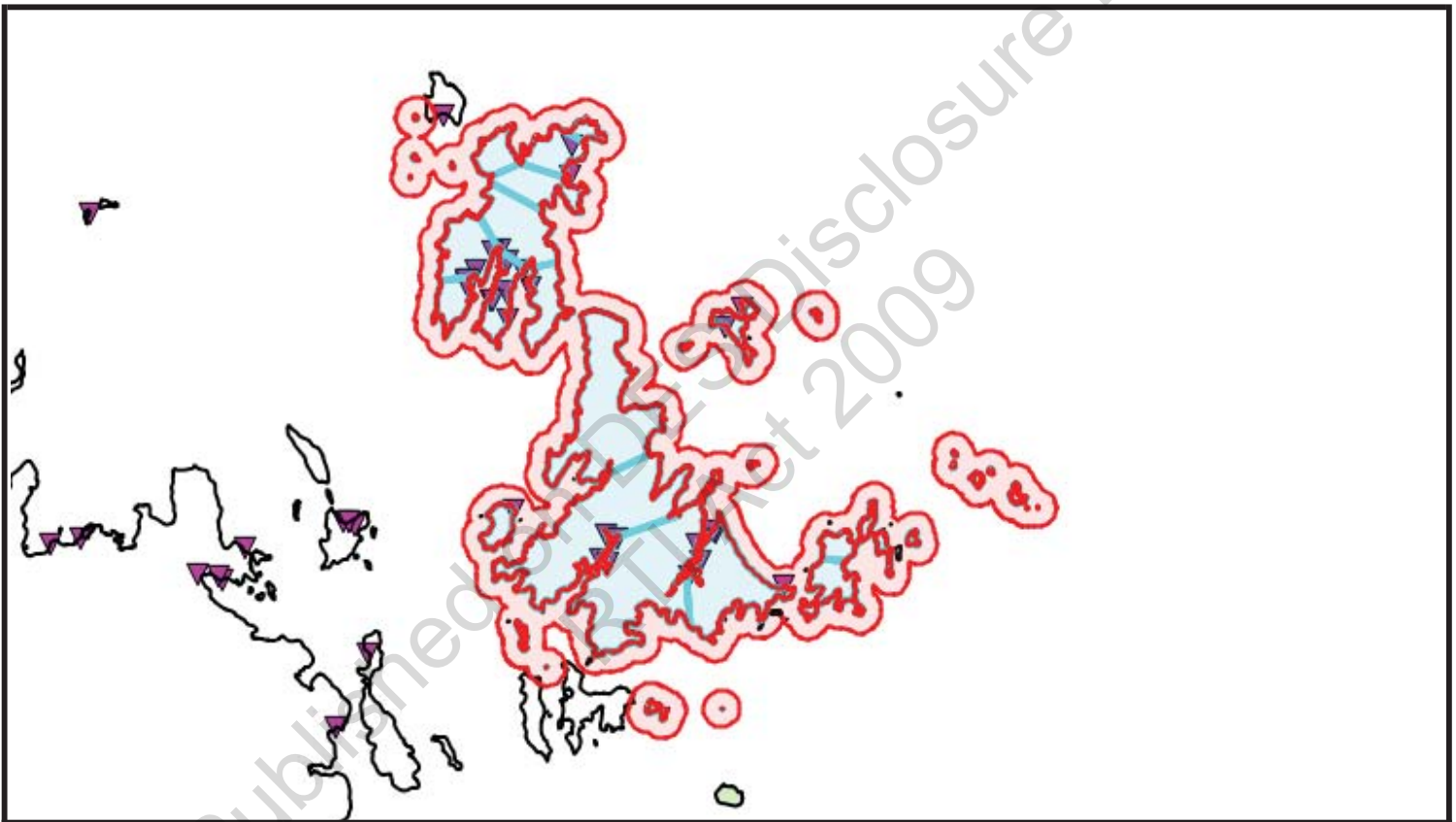
# Bushfire prone areas mapping

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### Lot on Plan Search

Reference Number:	<input type="text"/>
Lot:	428
Plan:	NPW621
LGA:	Whitsunday Regional
Buffer Distance:	1000 metres



Cultural heritage site points for the area are:

Site ID	Latitude	Longitude	Record Date	Attribute	Aboriginal Party
CTPI 49-Sch4					

Jul 26, 2018, 5:31 PM

### Lot on Plan Search

Cultural heritage site points for the area are:

Site ID	Latitude	Longitude	Record Date	Attribute	Aboriginal Party
CTPI 49-Sch4					

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### Lot on Plan Search

Cultural heritage site points for the area are:

Site ID	Latitude	Longitude	Record Date	Attribute	Aboriginal Party
CTPI 49-Sch4					

Regional Coordinator:

Name	Position	Phone	Mobile	Email
Leigh Preston	Cultural Heritage Coordinator North Region	07 4799 7562	sch4p4( 6) Person	Leigh.Preston@datcip.qld.gov.au

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## Lot on Plan Search

I refer to your submission in which you requested advice regarding Aboriginal or Torres Strait Islander cultural heritage recorded at your nominated location.

The Cultural Heritage Database and Register have been searched in accordance with the location description provided, and the results are set out in the above report.

Aboriginal or Torres Strait Islander cultural heritage which may exist within the search area is protected under the terms of the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003*, even if the Department of Aboriginal and Torres Strait Islander Partnerships has no records relating to it.

Under the legislation a person carrying out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal or Torres Strait Islander cultural heritage. This applies whether or not such places are recorded in an official register and whether or not they are located on private land.

Please refer to our website <https://www.datsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage> for a copy of the gazetted Cultural Heritage Duty of Care Guidelines, which set out reasonable and practicable measure for meeting the cultural heritage duty of care.

In order to meet your duty of care, any land-use activity within the vicinity of recorded cultural heritage should not proceed without the agreement of the Aboriginal or Torres Strait Islander Party for the area, or by developing a Cultural Heritage Management Plan under Part 7 of the legislation.

If your proposed activity is deemed a Category 5 activity pursuant to the Duty of Care Guidelines, there is generally a high risk that it may harm cultural heritage. In these circumstances, the activity should not proceed without cultural heritage assessment.

Where a category 5 activity is proposed, it is necessary to notify the Aboriginal or Torres Strait Islander Party and seek:

- a. Advice as to whether the area is culturally significant;
- b. If it is, agreement on how best the activity may be managed to avoid or minimise harm to any cultural heritage values.

The extent to which the person has complied with Cultural Heritage Duty of Care Guidelines and the extent the person consulted Aboriginal or Torres Strait Islander Parties about carrying out the activity – and the results of the consultation – are factors a court may consider when determining if a land user has complied with the cultural heritage duty of care.

Jul 26, 2018, 5:31 PM



## Lot on Plan Search

Should you have any further queries, please do not hesitate to contact the Search Approval Officer on 1300 378 401.

Kind regards

The Director

Cultural Heritage | Community Participation | Department of Aboriginal and Torres Strait Islander Partnerships

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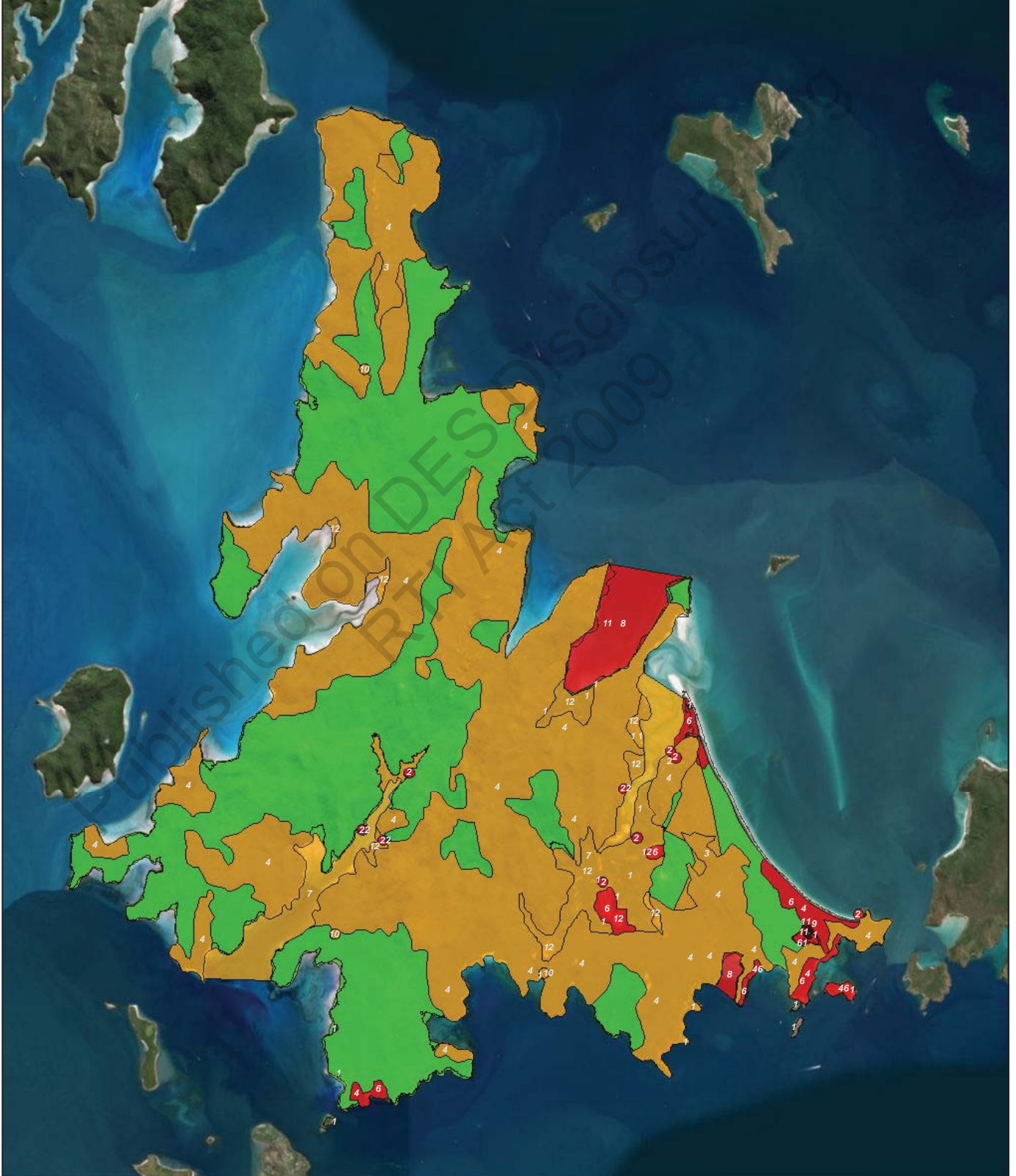
Heat map

Label	Dataset	Rating
1	Coastal Sheathtail Bat Habitat	Medium
2	Cultural Heritage Sites 100m Buffer	High
3	Ghost Bat Habitat	Medium
4	Koala Habitat	Medium
5	RE Least Concern	Low
6	RE Of Concern	High
7	Saltwater Crocodile Habitat	Medium
8	Sensitive Areas QPWS	High
9	Sensitive Areas WPOM	High
10	Swamp Orchid 100m Buffer	Medium
11	Tongue Bay Dugong Habitat	High
12	Water Mouse Habitat	Medium

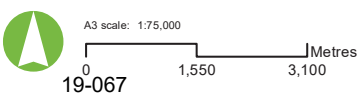
**Legend**

**Environmental Constraints Heat Map**

- High - known constraints exist
- Medium - potential constraints exist
- Low - no specific constraints exist



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Coordinate System: GDA 1994 MGA Zone 55

**Whitsunday Island Ecotourism Feasibility Study**

**Figure: Environmental Constraints Heat Map**  
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# Stakeholder & Community Consultation Plan

# 1 Stakeholder and Community Consultation Plan

## CHAPTER SUMMARY AND CONCLUSIONS:

A single engagement channel was adopted for the feasibility study to streamline the process and maintain focus on key stakeholder inputs. A select group of key stakeholders from the tourism industry, local government, environmental groups and local community groups were targeted to provide a strong sounding board for the current ideas and opportunities for the project.

The findings from the survey have confirmed the importance of further stakeholder and community consultation during the next phase of the Project. Stakeholders from first glimpse of the proposal are supportive of the idea of eco-tourism but they are hungry for more information and would like to see more consultation to help ease their concerns. Lack of information can heighten stakeholder concerns which often is unnecessary. They want to ensure the eco-tourism operation is low-impact and supportive of the natural and cultural values of the island.

Further community and stakeholder engagement on the Project must be planned with clear understanding of the purpose of engagement and what, if any, influence engagement outcomes may have on Project development. Two levels of engagement are potentially appropriate for next phases of the Project: Inform and Consult. More information on these two approaches can be found in section 1.4 of this plan.

## 1.1 Introduction and purpose

Aurecon is working in collaboration with project partners PricewaterhouseCoopers, EarthCheck, Tulipwood Economics and World Trail to deliver a feasibility study for premium ecotourism products on Whitsunday Island for the Department of Environment and Science (DES).

Applying the team's extensive knowledge and experience, the project aims to develop and implement a community and stakeholder plan that identifies key social, economic and environmental drivers to deliver this project.

The key engagement objective for this phase of the project is to support the assessment of options for the feasibility study and inform engagement for future project phases.

Engagement outcomes will help establish a vision for ecotourism on Whitsunday Island: what is valued, what should be protected, what should be highlighted and potential opportunities.

This Stakeholder and Community Consultation Plan identifies relevant stakeholders and sets out the purpose, process and timelines for engagement for the project.

## 1.2 Stakeholder analysis

The following stakeholders may be impacted by the project and/or may influence or become advocates for the project.

### Key internal (I) and external (E) stakeholders include:

- Department of Environment and Science (I)
- Pricewaterhouse Coopers (I)
- Tulipwood Economics (I)
- World Trail (I)
- EarthCheck (I)
- Tourism operators on the island (E)
- Mainland tourism operators (E)

- Tourists (E)
- Indigenous groups/communities (E)
- Local government (E)
- Environment and conservation groups (E)
- Whitsunday Residents (E)
- Whitsunday community groups (E)
- Local boat operators/owners (E)

Table 1 identifies stakeholders that have an interest in the project and assesses their level of influence.

Stakeholders have been identified as groups, individuals or organisations who have an interest in the region, Whitsunday Island and/or the natural environment more broadly. Stakeholders may be impacted by or influence the program to varying degrees of significance (assessed here as low, medium, high). This and their degree of interest in the project informs the level at which they will be engaged for this phase of the project. The level of engagement will be guided by the International Association for Public Participation's 'spectrum on engagement' (see Figure 1). Finally, the stakeholder analysis includes potential issues for each stakeholder and suggested measures to mitigate or leverage those issues.

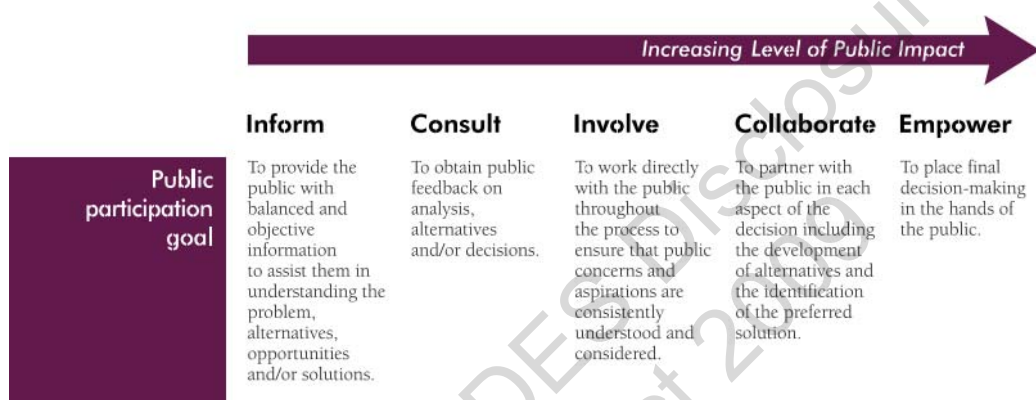


Figure 1 IAP2 Spectrum of public participation

#### 1.3.4 Key messages

Key messages will be developed to guide all communication and engagement activities with stakeholders. They will include (but not be limited to):

- Overarching messaging
- The Queensland Government is working towards its vision to make Queensland a world leader in ecotourism.
- Already a popular destination for tourists, Queensland boasts more than 1300 national parks, marine parks and other reserves that conserve a diverse array of species and ecosystems. The state also has a rich Indigenous cultural heritage and five World Heritage listed areas.
- Whitsunday Island, in the heart of the Great Barrier Reef, is central to the tourism offering of the Whitsunday region, with Whitehaven Beach and Hill Inlet being iconic Australian locations and major drawcards for domestic and international visitors to the state. With such a diverse array of species and ecosystems and rich cultural heritage, the opportunity of introducing sustainable and culturally responsible tourism on the island is of great interest to the Queensland Government and aligns with our vision to make Queensland a world leader in ecotourism.
- A feasibility study is currently being drafted to investigate opportunities to establish unique, premium ecotourism experiences and facilities on Whitsunday Island. With funding already committed and work already started on the island to upgrade existing visitor facilities and establish a new multi day walk across Whitsunday Island; this study is focusing on suitable activities such as low-impact eco-accommodation and showcasing destinations such as Whitehaven Beach and Hill Inlet.
- The development of premium ecotourism facilities and experiences will:
  - Create Australia's premium tropical island multi-day walk with unique eco accommodation
  - Support Traditional Owner partnerships and interests
  - Deliver unique, high quality natural experiences
  - Build on Queensland's reputation as an internationally celebrated tourist destination
  - Stimulate the economy of the Whitsunday region
  - Showcase Queensland's natural and cultural values
  - Deliver ecologically, environmentally and socially sustainable experiences
  - Create direct employment opportunities and develop the Traditional Owner workforce
  - Provide economic benefits for existing communities and commercial operators
  - Facilitate ecotourism, recreation and heritage experiences in parks and forests

- For Ecotourism Operations in national parks to be successful they must be conducted with an understanding of how the national park functions as an ecosystem, conserve cultural and heritage values, improve the visitor experience and be integrated into the park.
- The development and approval of new ecotourism operations must be aligned with the following best practice criteria: compatible with the natural and cultural values of the national park, designed to fit within the character of the national park, minimises its footprint on the Site, contributes to protecting and positively enhancing the national park, engages, involves and benefits Traditional Owners and local communities, encourages visitors to appreciate and want to protect and conserve the national park.

#### Survey messaging

- Aurecon on behalf of the Department of Environment and Science (DES) are contacting you today to request your participation in a survey that will help shape a feasibility study currently being drafted to investigate opportunities to establish unique, premium ecotourism experiences and facilities on Whitsunday Island.
- DES are targeting a select group of stakeholders who they believe are a key to part of these future plans. We are eager to hear from you to gain a stronger understanding of what the community and industry value about Whitsunday Island, what is unique and worth protecting and what potential opportunities exist.
- As a valued community or industry member, we respect your feedback and aim to engage and involve you in this process. The findings from the survey will feed into the next phase of the project, helping us align the ecotourism operations with the local value of Whitsunday Island.

#### **1.3.5 Deliverables**

Following the consultation process a consultation summary, which includes details of the engagement process, response rate, inputs received, key themes and trends, risk analysis and recommendations for future engagement activities

An email will also be sent to participants providing a project update and a summary of consultation findings.

#### **1.3.6 Timeframe**

The timing for the engagement activities is highlighted in the table below:

Activity	Timing	Owner	Status
Draft survey and scoping and constraints statement	20 August 2018	Aurecon: Communications and Stakeholder Engagement team (C&SE)	Complete
Create online survey	27 August 2018	Aurecon: C&SE	Complete
Launch survey	<del>3 September 2018</del> (Delayed) 27 September 2018	Aurecon: C&SE	Complete
Promote survey	w/c 3 September 2018	DES	Complete
Send out reminder to complete survey	<del>17 September 2018</del> 9 October 2018	Aurecon: C&SE	Complete
Close survey	21 September 2018 12 October 2018	Aurecon: C&SE	Complete
Summarise findings	15 – 19 October 2018	Aurecon: C&SE	Complete

Activity	Timing	Owner	Status
Send a summary of outputs to participants encouraging additional input and comment	TBC	DES	TBC
Draft Consultation Summary	From 19 October 2018	Aurecon: C&SE	Complete
Draft a public summary report	TBC	Aurecon: C&SE	TBC
Send close out email to participants with summary report	TBC	DES	TBC

### 1.3.7 Media relations and issue management

#### Media protocols

All media and government enquiries must be referred immediately to the DES. Aurecon will not respond directly to enquiries from journalists or elected representatives.

The project team will immediately inform the DES' Project Manager upon receiving an inquiry.

The process for responding to media will be:

- Determine the nature of the enquiry and the media group being represented
- Advise the media representative that you are not an authorised spokesperson and pass on the contact details of the DES Media Unit
- Record the media representative's details (name, phone number, organisation, date and time of enquiry, questions and deadline) and forward to DES

#### Issue management

Potential stakeholder and community issues will be discussed as part of the project team's ongoing meetings. An initial list of potential issues has been outlined in the stakeholder analysis section of this plan. As the project develops some of these risks may be realised and others identified. Issues raised by stakeholders and potential risks assessed by the Communication and Stakeholder Engagement team will be monitored and mitigations prepared as necessary.

In the event of an unforeseen or unplanned event the following actions will take place:

- Project representative will contact the Project Manager (DES)
- Situation will be assessed, and mitigation actions proposed for clearance
- Agreed actions will be taken and monitored for effectiveness

## 1.4 Findings and next steps

This section of the Stakeholder and Community Consultation Plan has been drafted post consultation for the Feasibility Study phase of the project. It summarises the findings of consultation and provides recommendations for the next phase of the project.

Engagement questions were structured to obtain high level information which helped discover key opportunities and concerns that will shape the next phase of the Project.

The findings from the survey have confirmed the importance of further stakeholder and community consultation during the next phase of the Project. Stakeholders from first glimpse of the proposal are supportive of the idea of eco-tourism but they are hungry for more information and would like to see



more consultation to help ease their concerns. Lack of information can heighten stakeholder concerns which often is unnecessary. They want to ensure the eco-tourism operation is low-impact and supportive of the natural and cultural values of the island.

Key stakeholder groups such as the Whitsunday Regional Council, Whitsunday Tourism, industry and environmental groups are vital to the delivery of the Project. Refer to the Stakeholder Analysis in the Stakeholder and Community Consultation Plan contained in Appendix F for more details on these stakeholders' interests.

The feasibility study will recommend an eco-tourism product; therefore, the type of activity and location will be pre-determined for the next phase of the Project. With this in mind, it is important DES consider what is fixed and what is still being shaped through market and stakeholder engagement and what the purpose of engagement is. No matter what level of participation is implemented for engagement it is important expectations are communicated clearly to ensure participating stakeholders understand what the Project is seeking and how this process will inform the Project outcomes.

#### **1.4.1 Further engagement**

Further community and stakeholder engagement on the Project must be planned with clear understanding of the purpose of engagement and what, if any, influence engagement outcomes may have on Project development. Two levels of engagement are potentially appropriate for next phases of the Project: Inform and Consult.

#### **1.4.2 Inform level of engagement**

If the Project seeks to inform the community and stakeholders, further engagement that provides balanced and objective information will help build understanding and appreciation of the delivery and ongoing management of the eco-tourism product. Information and messaging for engagement should be aligned with the Queensland Government's Ecotourism Best Practice Criteria and with consideration for the findings and potential issues identified in this study. Key topics should include employment opportunities, environmental considerations, cultural heritage considerations and economic assessment findings. This information will help build confidence amongst the community that government is delivering a well thought out product that aligns with industry best practice whilst considering local values.

The following activities are recommended for consideration:

- Online project information covering key topics mentioned above, supporting studies/reports, maps, images and artist impressions of proposed product.
- Community Information Sessions
- Walk through sessions in the Whitsunday area with stations covering key topics and an expert representative to answer possible questions
- Fact sheets summarising key topics from the feasibility study and a project information sheet with an overview of the Project and next steps
- Social media to promote the Project and information sessions via social media channels. Utilise existing key stakeholder channels such as Tourism Whitsundays and Council
- Key stakeholder briefings including but not limited to:
  - Council
  - Whitsundays Tourism
  - Chamber of Commerce

- Online survey targeting tourists seeking feedback from potential users to help finesse the product whilst promoting Whitsunday Island. To successfully deliver this engagement tool it is recommended DES partner with Queensland Tourism and Events and Whitsunday Tourism.

Some alternatives to the above standard engagement activities could be activities such as:

- 3D virtual reality technology: this tool could be utilised to demonstrate visual amenity. Participants could virtually stand from key locations on the island and see what the 'actual' impact will be to the outlook. This tool could also be used to promote key features or locations that some participants may not be familiar with, helping demonstrate the uniqueness of the product.
- Community information session activity: create a model of the product that allows attendees to walk through a condensed version of the walk and ecotourism product. Key features and locations can be highlighted through the use of images or video. The interactive map would help participants visualise the new product.
- Community information session activity: a full size model of the planned ecotourism accommodation could be set up at the session, demonstrating the look and feel of the facilities, allaying concerns that it may not be appropriate for the site.

Upon completion of the engagement process a summary report would be drafted capturing key figures including level of participation and demographics of participants to help demonstrate reach of engagement, an overview of activities carried out and a summary of questions raised. Further, benchmarking and follow up market research could be undertaken to determine changes to awareness, understanding and sentiment regarding the project.

#### **1.4.3 Consult level of engagement**

If DES found there were some areas of the Project that required more community and stakeholder input, a consultative approach to engagement opening a conversation with stakeholders could include:

- Key stakeholder forum
- Online engagement hub that seeks feedback through a survey and an online public forum
- Online polling promoted through social media channels

Engagement in this case could have the purpose of identifying opportunities to improve the product and ways the community may benefit from it and contribute to it. The engagement summary report would also be adapted to include the feedback from these activities.

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# Potential accommodation types

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# Accommodation amenity ratings

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# Market sounding outcomes

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# Whitsunday Island site visit images

Whitsunday Island  
Tongue Point  
Whitehaven Beach  
Craig Walk Inspections

19 September 2018

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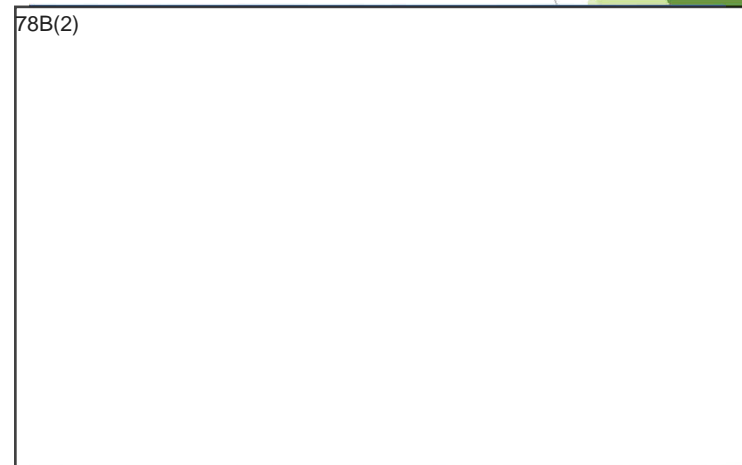
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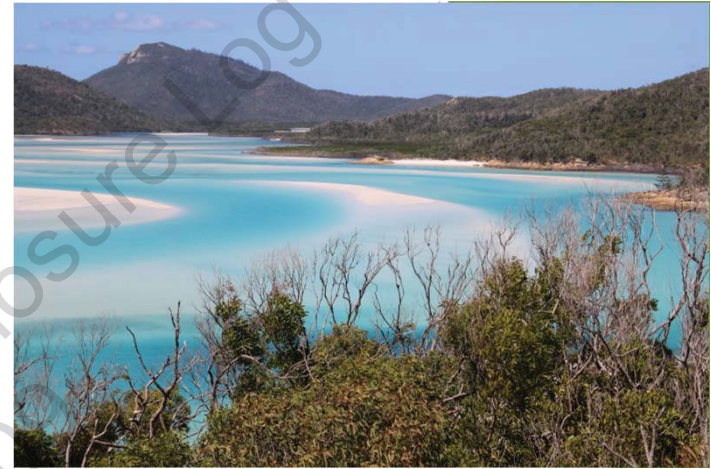
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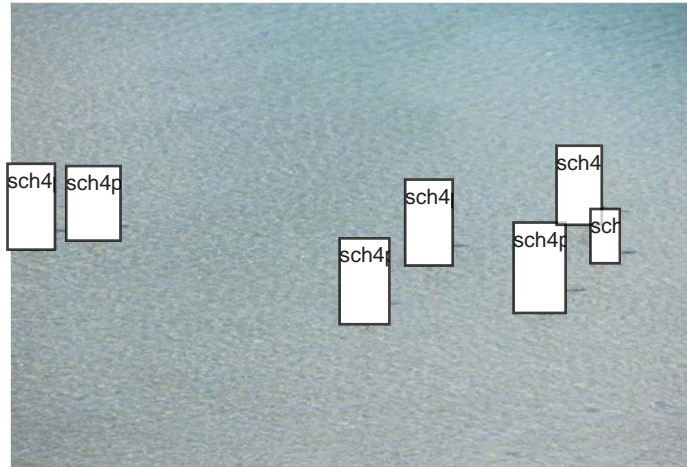


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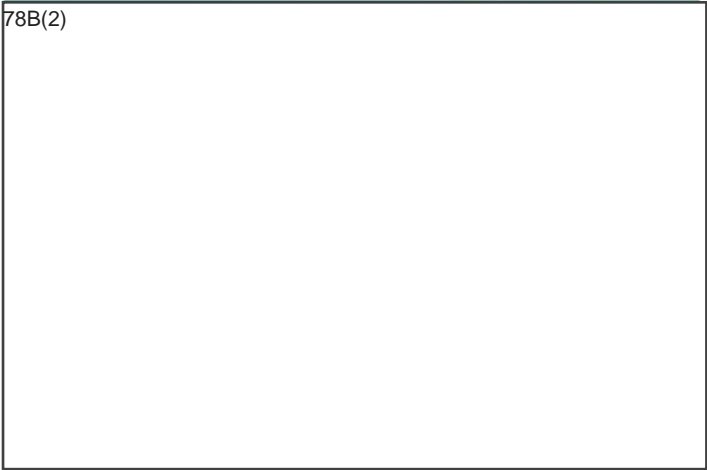


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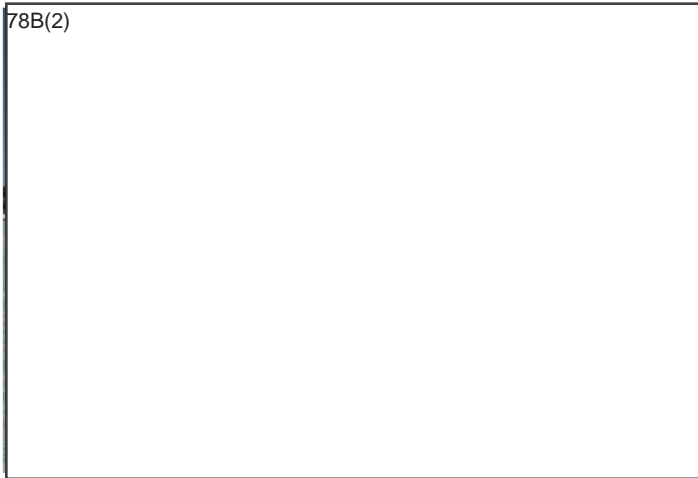
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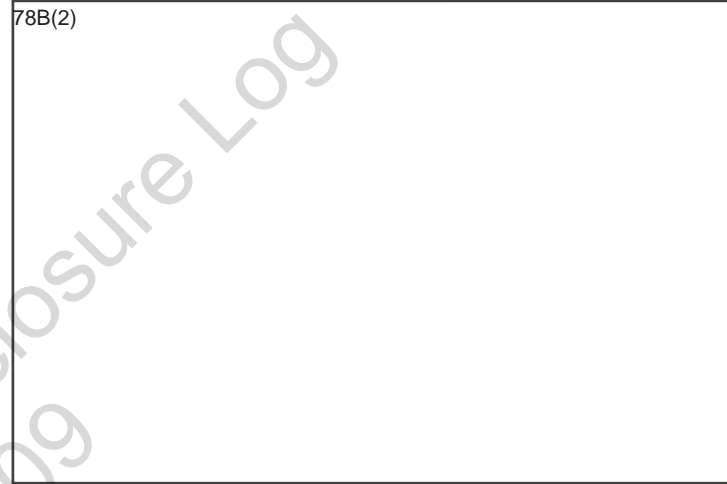
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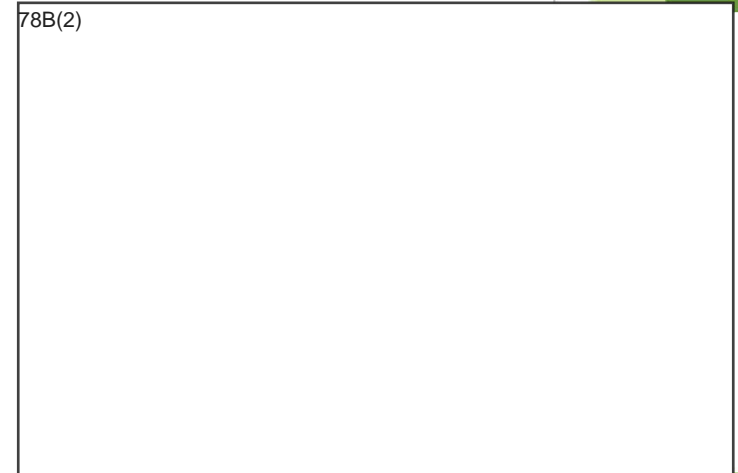


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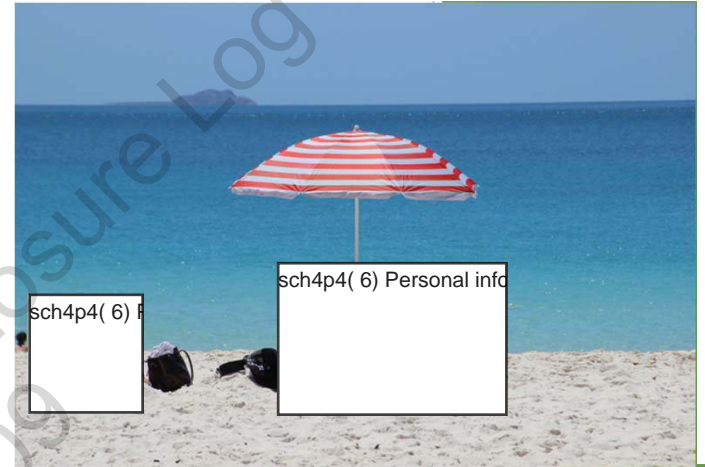
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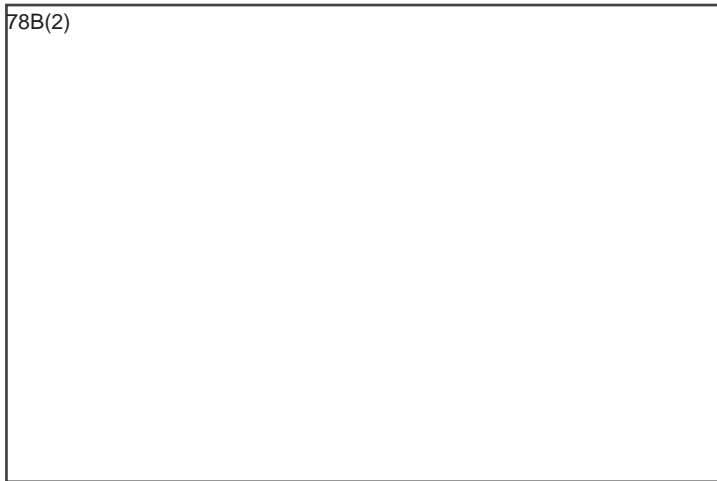


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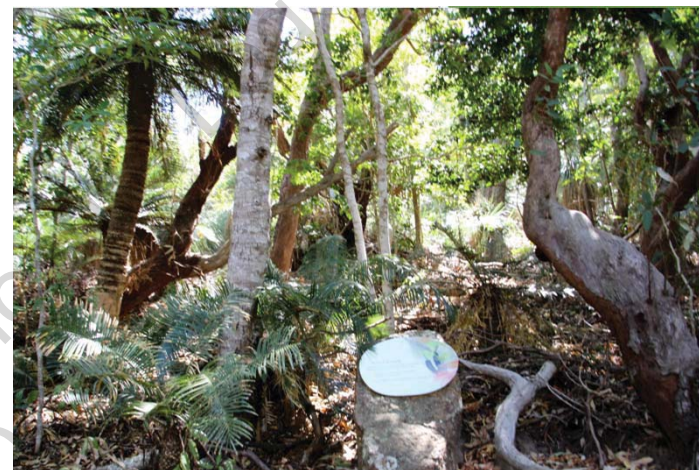
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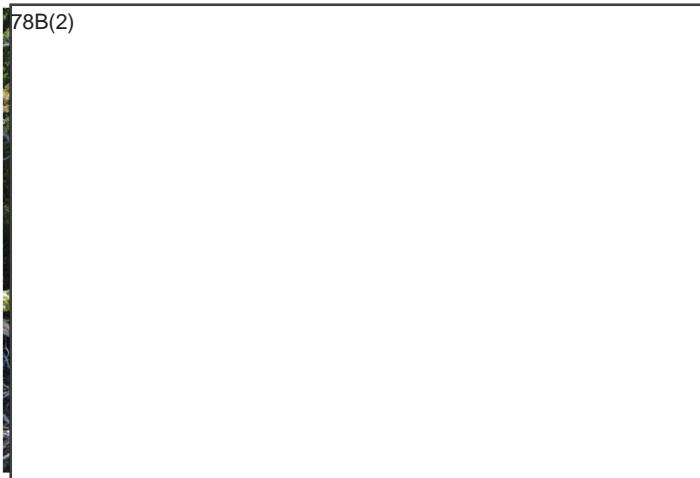


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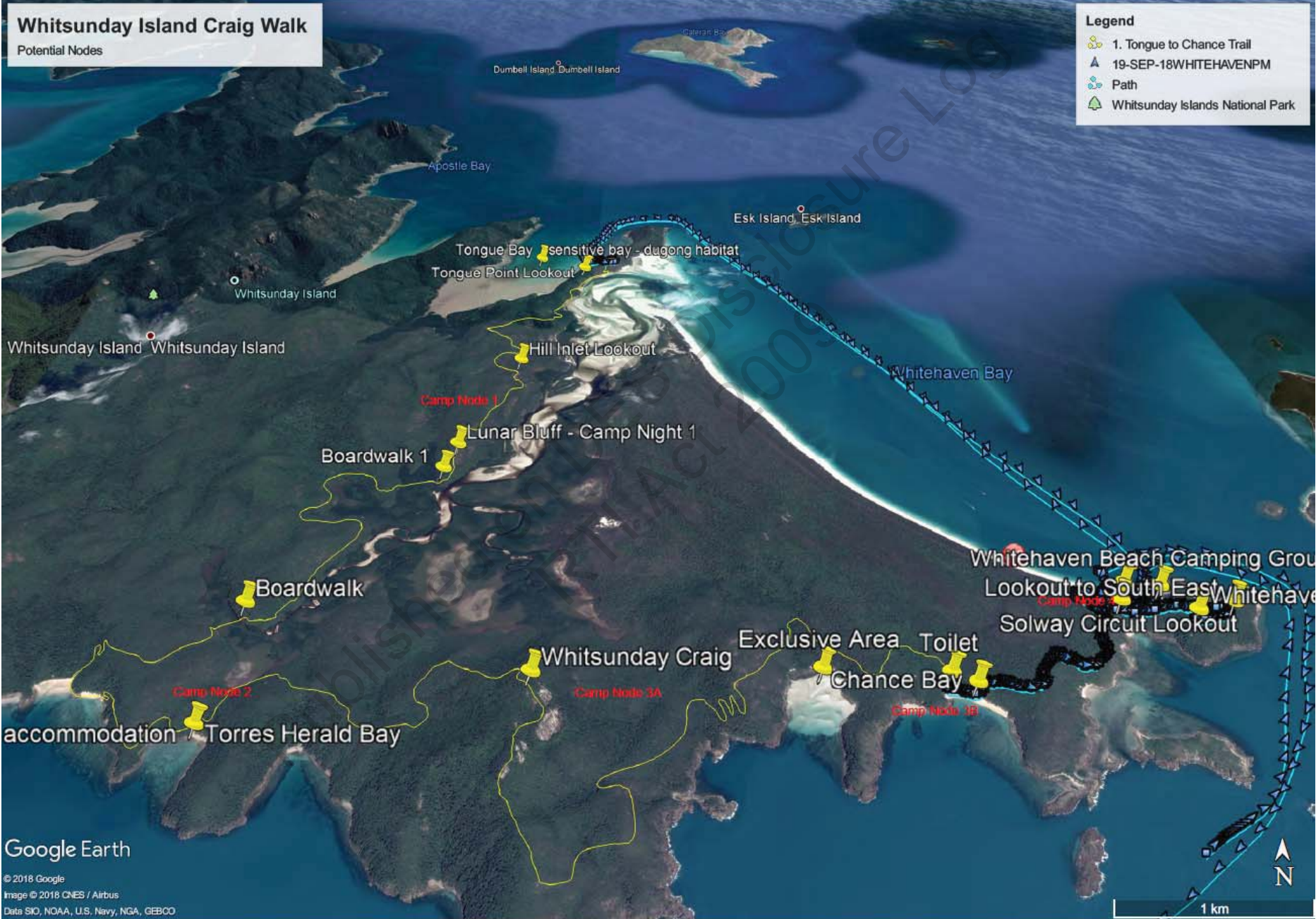


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# Map of Whitsunday Island Trail



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# Potential camp sites and accommodation

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# Cost estimates

Cost estimate - Option 2.3A

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Cost estimate - Option 2.3B

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