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Great Keppel Island

Environmental Management Plan

NOVEMBER 2011



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REVITALISATION PLAN



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Environmental Management Plan

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Glossary

Term	Definition
AS	Australian Standard
CASA	Civil Aviation Safety Authority
CHMP	Cultural Heritage Management Plan
CSD	Cutter Suction Dredge
Cth	Commonwealth
DERM	Department of Environment and Resource Management (Queensland)
EIS	Environmental Impact Statement
EMP	Environment Management Plan
EMS	Environment Management System
EP Act	<i>Environmental Protection Act 1994</i> (Queensland)
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
GKI	Great Keppel Island
LSC	Livingstone Shire Council (Former Council)
QHA	<i>Queensland Heritage Act 1992</i> (Queensland)
Qld	Queensland
RRC	Rockhampton Regional Council
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities (Commonwealth)
TOR	Terms of Reference

1 Introduction

1.1 Purpose of EMP

This Environmental Management Plan (EMP) has been prepared on behalf of the proponent, GKI Resort Pty Ltd, to protect the environmental, social and cultural heritage values potentially affected by the Great Keppel Island Revitalisation Plan (the Project) during the construction and operation phases. The EMP does not incorporate detailed design elements of the proposal which may also influence environmental management measures of the Project as these are addressed in the *Development Control Plan* for the Island.

Until Lease conditions change the EMP also notes the *Land Management Plan* (LMP) which has been prepared as part of the lease conditions for Lot 21. As further reviews of the EMP occur, actions under the LMP will be amalgamated under sub-plans of the EMP including but not limited to the *Weed and Pest Management Plan*.

1.2 Objectives

The objectives of this EMP are to provide:

- Assurance to the community and to the government that the Proponent will endeavour to minimise environmental, cultural and social impacts during all phases of the Revitalisation Plan from initial construction through to the commissioning of the Resort;
- A base for the development of detailed environmental management plans for inclusion in the construction and operational contracts which could be run concurrently;
- Practical and achievable commitments to ensure that the Project will have minimal impacts;
- An integrated plan for monitoring, assessing and controlling potential impacts once the Project has been approved and all permits and conditions granted; and
- Local, State and Commonwealth authorities with a common focus for approval conditions and compliance with policies and conditions.

1.3 EMP Structure

The EMP has been prepared utilising the recommended structure outlined in the Terms of Reference (ToR) for the Project as outlined below in **Table 1.1**.

Table 1.1: EMP Structure

Element / Issue	Aspect of construction or operation to be managed (as it affects environmental values).
Operational Policy	The operational policy or management objective that applies to the element.
Performance Criteria	Measurable performance criteria (outcomes) for each element of the operation.
Implementation Strategy	The strategies, tasks or action program (to nominated operational design standards) that would be implemented to achieve the performance criteria and also include the implementation agency for each element of the EMP.
Monitoring and Auditing	The monitoring requirements to measure actual performance (i.e. specified limits to pre-selected indicators of change). The auditing requirements to demonstrate implementation of agreed construction and operation environmental management strategies and compliance with agreed performance criteria.
Reporting and Corrective Action	Format, timing and responsibility for reporting and auditing of monitoring results. The action (options) to be implemented in case a performance requirement is not reached and the person(s) responsible for action (including staff authority and responsibility management structure).

1.4 Legislation

Key legislation that is relevant to the construction and operation of the Project are listed in **Chapter 1** of the EIS.

1.5 Responsibilities

The Proponent has overall responsibility for implementing the EMP.

All the Proponents employees, contractors and associated personnel involved in the Project are responsible for the environmental performance of their activities and for complying with the General Environmental Duty as set out in Section 319(1) of the EP Act, which states:

“A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measure to minimise the harm.”

A number of parties will be involved in the construction and operation of the Project, with position titles and accountabilities to be finalised closer to commencement of construction and operations. The EMP will be updated accordingly to reflect the responsibilities of these roles which are described below:

GKI Resort Pty Ltd (the Proponent): Responsible for the overall management of the construction and operation of the Project.

Environmental and Cultural Heritage Manager: Responsible for ensuring the Proponent, its contractors and employees are aware of their responsibilities under the EMP and any approval permit conditions. The Environmental Manager will develop the Environmental Management System under the umbrella of ISO 14000 series, work with the Traditional Owners to implement the Cultural Heritage Management Plan (CHMP), develop and run awareness training sessions and visitor inductions, conduct regular audits, oversee the monitoring programs, prepare internal and external compliance reports, prepare relevant plans, procedures and policies to assist the Proponent to comply with its obligations. The Environmental Manager will have appropriate environmental qualifications and experience and be supported by external professionals where necessary. This role will also be supported by rangers and environmental officers to oversee the eradication of feral goats, implementation of the weed management plans, maintenance of the Environmental Protection Precinct and constructed wetlands and implementation of the waste management programs on the site.

Construction Manager: Principal Contractor Manager. It is the responsibility of the Construction Manager to ensure that the construction teams are adequately resourced to enable all personnel to carry out their duties in an environmentally responsible manner. The Construction Manager may assign supervisors or team leaders to comply with the requirements of this EMP as his/her representative.

Construction Contractor/s: Responsible for developing detailed construction plans along with detailed Construction EMP sub-plans in compliance with the overarching construction EMP, development approvals and contract conditions. The construction contractor is also responsible for implementing and complying with the Construction EMP, development approvals and contract conditions. A contractor's environment management representative will be appointed to ensure implementation of the construction EMP including any day-to-day monitoring and reporting requirements.

Resort Manager: Principal Operational Manager. It is the responsibility of the Resort Manager to ensure that the various work teams are adequately resourced to enable all personnel to carry out their duties in an environmentally responsible manner. The Resort Manager may assign supervisors or facilities managers (e.g. manager of marina, golf course or hotel) to comply with the requirements of this EMP as his/her representative.

1.6 Competence, Training and Awareness

All project staff and contractors will complete a comprehensive project induction relevant to each of the stages of the Project. The induction will include a review of the Project environment management procedures and requirements. Project supervisors and managers will be provided with further detailed training regarding the implementation of the EMP.

This training will be updated frequently. Daily tool box meetings will be conducted by the contracting teams and regular team meetings will be held during each stage of the Project to highlight and discuss environment management issues relevant to each area of work.

1.7 Incident Management

Management of near-misses and incidents is important to reduce the likelihood of an event occurring that could cause harm to the environmental, cultural heritage or social values on the Island. All near-misses and incidents will be reported to the Environmental Manager who will follow up with the relevant manager to ensure adequate response is undertaken to avoid a recurrence. A near miss is any event that could have had the potential to cause harm and an incident will be regarded as any event that harms or has the potential to harm environmental, cultural or social values on the Island or surrounds. In the event that a near-miss or an incident occurs, the following steps will be followed immediately:

- Prevention of further pollution / environmental/cultural heritage/social value harm;
- Clean-up and /or control of polluting substance(s);
- Implementation of mitigation measures to prevent recurrence of similar incident;
- Document and instigate incident investigation as appropriate; and
- Reported to the Environmental Manager.

Incidents likely to cause off-site impacts or significant environment harm will be reported by the appropriate manager to the Department of Environment and Resource Management (DERM) or appropriate authority in accordance with statutory requirements.

1.8 Incidents and Complaints Register

The Environmental Manager will maintain a record of all near misses, incidents and complaints received. The Environmental Manager in consultation with the Construction and/or Resort Manager shall review all incidents and complaints, report to the Proponent and assess or direct a response as appropriate. Corrective action and other recommendations shall be made and documented.

1.9 Auditing

Auditing is to be carried out by the Environmental Manager to ensure that activities are undertaken in accordance with the objectives of the EMP and to ensure that required outcomes are being achieved. All auditing will be undertaken by a competent person and documented to communicate the results of the audit to the Construction Manager and/or the Resort Manager and the Proponent.

1.10 Review

This EMP is a dynamic document that will be reviewed regularly and revised to reflect changes and new developments associated with the Project. Revisions will include, but not be limited to:

- Inclusion of recommendations from environmental specialists, government officers, contractors, Island residents and conservation groups;

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- Inclusion of final organisational structures for construction and operational staff and the allocation of responsibilities in line with the organisational structure;
- Inclusion of relevant approval conditions arising from the approval and subsequent permits, authorities and/or licences;
- Review of EMP at the end of the construction phase; and
- Inclusion of any site-specific elements relevant to new developments as they occur during the life of the Project.

Additional revisions will occur on an as-needed basis, including revisions to address items identified during incident investigations, inspections or audits.

2 Construction Environmental Management Plan

2.1 Climate Change

Element / Issue	Description
Operational Policy	Construct the Project in a manner that minimises carbon emissions
Performance Criteria	<ul style="list-style-type: none"> Maintain compliance with all relevant statutory and approval requirements Ensure energy efficiency plant, vehicles and equipment selected for use onsite Minimise impacts of natural hazards and climate change through appropriate setbacks and design
Implementation Strategy	<ul style="list-style-type: none"> Minimise carbon emissions and energy use through choice of energy efficient plant, vehicles and equipment Contractors to monitor and report monthly the type of fuel, rate of consumption and electricity usage if metered
Monitoring and Auditing	<ul style="list-style-type: none"> Monitoring by Construction Manager of fuel and energy consumption and report monthly to Environmental Manager Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> Monthly environmental report to be prepared by Environmental Manager Any noncompliance with the performance criteria shall be documented Corrective action will be undertaken in consultation with the Environmental and Construction Manager, the Proponent and any relevant authorities (if necessary) Opportunities for corrective action will be obtain from the <i>National Framework for Energy Efficiency – Energy Efficiency Opportunities Assessment Handbook</i>

2.2 Land

Element / Issue	Description
Operational Policy	Minimise the environmental impact upon soil created by erosion or contamination
Performance Criteria	<ul style="list-style-type: none"> Create no increase in soil degradation due to construction activities Create no release of contaminants to soil Prevent loss of sediment to watercourses through implementation of <i>Erosion and Sediment Control Plan</i> Receive minimal or no complaints regarding impacts from contamination to soils or soil erosion Store, transport and handle all hazardous materials as per relevant guidelines Maintain compliance with all relevant statutory and approval requirements
Implementation Strategy	<p>Soil Management</p> <ul style="list-style-type: none"> An <i>Erosion and Sediment Control Plan</i> will be developed by a competent person for each parcel of contract works prior to construction commencing and will include: <ul style="list-style-type: none"> identification of temporary and permanent controls construction methods inspection frequency options for beach nourishment All erosion and sediment control devices will be inspected regularly for damage and effectiveness. As a minimum, inspections will occur prior to any forecasted inclement weather and following any rainfall event over 20mm in 24 hours Clearing and earthworks are undertaken in the dry season where possible Eroded road works and tracks to be repaired prior to use by construction vehicles Earthworks to be staged to enable improved controls

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Element / Issue	Description
	<p>Contaminated Land or Acid Sulfate Soil Disturbance</p> <ul style="list-style-type: none"> • The Construction EMP will include the following requirements to minimise the risk of spillage, contamination of soils or release of leachate from acid sulfate soils: <ul style="list-style-type: none"> ○ all storage of fuel and chemicals to comply with relevant standards and legislation including: <ul style="list-style-type: none"> ○ <i>AS 1940 The storage and handling of flammable and combustible liquids</i> ○ <i>AS 1216 Classification, Hazard Identification and Information Systems for Dangerous Goods</i> ○ <i>AS 1678 Emergency Procedures Guides – Transport</i> ○ <i>AS 3780 The storage and handling of corrosive substances</i> ○ <i>AS 4452 The storage and handling of toxic substances</i> ○ <i>Queensland Dangerous Goods Safety Management Act 2001</i> or subsequent piece of legislation ○ spill kits are to be located at all points of storage and use of hazardous substances and include bilge socks, heavy duty polypropylene pads, floating booms and blowback refueling collars ○ all employees are to be trained in the use of spill kits and the correct disposal of contaminated material ○ re-fuelling activities are only to be undertaken in designated areas ○ regular check and maintenance of all fuel storage devices to occur and leakages to be treated as an 'incident' ○ register of Material Safety Data Sheets ○ if any indication of contamination found within areas to be disturbed e.g. old rubbish tips, a full site assessment and remediation program to be implemented by a qualified land contamination specialist ○ areas that may have Potential Acid Sulfate Soils to be tested prior to works commencing and appropriate controls in place to manage
Monitoring and Auditing	<ul style="list-style-type: none"> • Environmental checklist to be completed by the Environmental Manager • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent • All monitoring of contaminated sites will be against ANZECC <i>Guidelines for the Assessment and Management of Contaminated Sites</i> if any such sites are discovered. • All monitoring of Acid Sulfate Soils will be in adherence with QASSIT Guidelines
Reporting and Corrective Action	<ul style="list-style-type: none"> • Monthly environmental report to be submitted to the Proponent by Environmental Manager • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.3 Nature Conservation

Element / Issue	Description
Operational Policy	Minimise the environmental impacts on abundance and distribution of marine and terrestrial flora and fauna and minimise the introduction and spread of pest species
Performance Criteria	<ul style="list-style-type: none"> • Maintain compliance with all relevant statutory and approval requirements • No unauthorised clearing of native vegetation or removal of marine plant species • No introduction or spread of declared weeds and pest animals • Eradication/reduction in numbers of pest plants and animals • Mitigate the loss of vegetation through appropriate offsets • Minimise disturbance to fauna • Implement the <i>Land Management Plan</i> • Marking the boundaries of the Environmental Protection Precinct • Wildlife corridors retained • Appropriate buffers around sensitive habitats retained
Implementation Strategy	<p>Terrestrial and Freshwater Flora and Fauna</p> <ul style="list-style-type: none"> • A <i>Terrestrial and Freshwater Flora and Fauna Management Plan</i> will be developed prior to construction including the following elements / requests / considerations: <ul style="list-style-type: none"> ○ detailed pre-clearing survey to identify all significant flora and fauna species prior to proposed clearing activities ○ dense restoration of native vegetation undertaken at limits of disturbance to minimise edge effects ○ rehabilitate all disturbed surfaces with indigenous/regionally specific plants ○ manage topsoil to ensure nutrient values retained ○ translocation plan for significant species involving contingency plans including population relocation/propagation, habitat relocation (hollow logs) and on-going monitoring ○ wetlands to be constructed adjacent to the golf course prior to earthworks for course commencing ○ identification of designated vegetation buffer areas and corridors ○ details of vegetation clearing procedures and permit conditions to be included in all relevant contract documents ○ site landscape plan for implementation during the finalisation of the construction phase ○ access restrictions to minimise disturbance on flora and fauna ○ utilisation of fauna spotter catchers, if necessary, for inspection of hollows, trenches, pits and machinery prior to and during construction ○ no clearing will occur within 100 metres of a hollow tree inhabited by a rusty monitor ○ noise impacts on the nesting habits of the Beach Stone Curlew ○ identified shorebird habitats are excluded from public access from October to March and buffered by 160 metres ○ education program to include DERM Turtle Watching Guidelines ○ general wildlife education guidelines • No clearing outside of permit conditions with clearing limits to be clearly marked with flagging tape • Speed restriction of 30 kilometres per hour to prevent animal injuries • Drive only on cleared tracks where practical and limit the construction of new tracks • No domestic animals or firearms allowed on the Resort grounds (unless permitted for pest eradication)

Element / Issue	Description
	<ul style="list-style-type: none"> • No fires are to be lit (unless permitted) • Clearly delineated access and no-access areas on maps and on-ground during construction activities to allow fauna escape routes • Provide fauna crossings over culverts equipped with dry cells • Cleared or removed vegetation habitat saved for reuse in other habitat rehabilitation • Negotiate with relevant authorities and the community to enforce slow vessel speeds in relation to barging of goods and constructions workers to reduce the disturbance to megafauna <p>Weed and Pest Animals</p> <ul style="list-style-type: none"> • A <i>Weed and Pest Management Plan</i> will be developed prior to construction including the following: <ul style="list-style-type: none"> ○ pre-clearing survey to identify presence, location and abundance of any declared weeds and pest animals (including possums) ○ awareness training for contractors, staff and visitors ○ wash-down locations and procedures for all vehicles, machinery, equipment and portable infrastructure ○ access restrictions on weed infested areas ○ routine monitoring schedules ○ appropriate vermin control ○ creation of an island nursery for ongoing plant stock material to reduce the introduction of pathogens ○ ensure landscape plantings are non-invasive native species indigenous to the Island or the surrounds ○ inspection of all plant, equipment and construction material before arriving for pest species with specific inspection for Cane Toads and tadpoles ○ ongoing prevention of Cane Toad introduction via equipment monitoring and education ○ weed and pest education guidelines • As a minimum, all vehicles and machinery must be washed down on the mainland and weed hygiene declarations completed by a competent person <p>Marine Flora and Fauna</p> <ul style="list-style-type: none"> • A <i>Marine Flora and Fauna Management Plan</i> will be developed prior to construction including the following: <ul style="list-style-type: none"> ○ marine ecology monitoring prior to marina construction activities ○ management practices to minimise impact of construction on waterways, mangroves and beach areas (e.g. silt fences, chemical storage) ○ biodegradable hydraulic fluids used in machinery working over water ○ details of permitting requirements for mangrove disturbance ○ rehabilitation of impacted mangrove and salt flats ○ onsite monitoring of marine mega-fauna during piling activities as per permit conditions ○ DEEDI's <i>Fisheries Guidelines for Fish Friendly Structures</i> • No construction works outside of permitted areas • No introduction of exotic pest species in ballast water • Construction of submarine cables to occur using best practice • Construction activities to cease if mega-fauna is in close proximity to construction area • Piling activities will cease if marine fauna such as dugongs, turtles or dolphins are within close proximity to work area

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Element / Issue	Description
	<p>Lighting</p> <ul style="list-style-type: none"> • No spillage of construction lighting is to be directed towards the beach or other sensitive receptors • Lighting near marine areas to be selected based on marine fauna sensitivities • During the turtle breeding and hatching season (September to April) a light exclusion zone will be in place as per permit conditions
Monitoring and Auditing	<ul style="list-style-type: none"> • Environmental checklist to be completed by the Environment Manager • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent • Staff trained during toolbox talks to identify pest species
Reporting and Corrective Action	<ul style="list-style-type: none"> • Monthly environmental report to be prepared by Environmental Manager • Any noncompliance with performance criteria shall be documented as an incident or near miss • Corrective action will be undertaken in consultation with the Environmental Manager and Construction Manager and any relevant authorities

2.4 Water Resources

Element / Issue	Description
Operational Policy	<p>To reduce environmental impacts to surface water and groundwater quality</p> <p>To limit the consumption of water</p>
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all statutory and approval requirements • Prevent contamination of surface and groundwater • Prevent impacts on downstream environments • Water consumption per head less than mainland
Implementation Strategy	<p>Groundwater (temporary and emergency use)</p> <ul style="list-style-type: none"> • A <i>Groundwater Management Plan</i> will be developed prior to construction including: <ul style="list-style-type: none"> ○ Well-head protection plans ○ Effluent Disposal Management Plan ○ Sustainable yield ○ Monitoring/regulation of extraction rates ○ Detailed groundwater monitoring plan • Use only authorised and licensed bores to extract water • Meter and record the usage of all bores • Adhere to bore water permit conditions as specified by DERM • Do not store chemicals within 50 metres of a well-head <p>Surface Water</p> <ul style="list-style-type: none"> • Do not store chemicals or allow re-fuelling activities to occur within 100 metres of a waterway • Stormwater is to be diverted away from construction areas in accordance with the <i>Erosion and Sediment Control Plan</i> • Stormwater within the construction area must be assumed contaminated and treated as wastewater for use on gardens and as dust control <p>Wastewater</p> <ul style="list-style-type: none"> • Wastewater is to be contained and treated onsite to comply with minimum water quality requirements specified for "<i>Municipal Use – open spaces, sports grounds, golf courses, dust suppression etc. or unrestricted access and application.</i>" • Wet weather storage facility, comprising several ponds will be constructed to

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Element / Issue	Description
	avoid ocean outfall <ul style="list-style-type: none"> Treated wastewater is to be reused for construction activities such as dust suppression and landscape watering where possible
Monitoring and Auditing	<ul style="list-style-type: none"> Environmental checklist to be completed by the Environmental Manager Groundwater and surface monitoring to be conducted as per permit requirements Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent All monitoring to occur in accordance with the <i>DERM Monitoring and Sampling Manual 2009</i>
Reporting and Corrective Action	<ul style="list-style-type: none"> Monthly environmental report to be submitted to the Proponent by Environmental Manager Any noncompliance with the performance criteria shall be documented as an incident Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities

2.5 Coastal Management

Element / Issue	Description
Operational Policy	Reduce environmental impacts on coastal water quality, hydrodynamics and sedimentation
Performance Criteria	<ul style="list-style-type: none"> Limit short term effects on coastal water quality during dredging operations Mitigate effects of sedimentation and hydrodynamics during marina construction No sea dumping of spoil
Implementation Strategy	<p>Hydrodynamics and Sedimentation</p> <ul style="list-style-type: none"> Establish a dredged sediment trap between the marina and Putney Point during initial capital dredging works Deploy temporary mesh and structure to alleviate impacts of construction traffic over beaches and dunes when exiting barges and vessels <p>Sediment Quality and Dredging</p> <ul style="list-style-type: none"> Use a small to medium Cutter Suction Dredge (CSD) and experienced operator to limit the amount of suspended sediments during dredging Reuse of dredge spoil to fill geotextile bags to provide core of breakwater and marina revetments A silt curtain of adequate length shall be available for easy and immediate deployment should turbidity of work area be of concern <p>Marine Water Quality</p> <ul style="list-style-type: none"> A <i>Dredge Management Plan</i> will be developed prior to construction Marina construction to be staged to contain turbid plumes. The protruding break-wall is to be constructed first Educate construction workers on the sensitivity on the marine environment and the priority of Water Quality through a litter and Water Quality Education Program
Monitoring and Auditing	<ul style="list-style-type: none"> Real-time turbidity loggers will be used to monitor suspended sediments during dredging and marina construction Environmental checklist to be completed by the Environmental Manager Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager

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Element / Issue	Description
	<ul style="list-style-type: none"> Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> Monthly environmental report to be prepared by Environmental Manager Any noncompliance with the performance criteria shall be documented as an incident or near miss Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities

2.6 Air Quality

Element / Issue	Description
Operational Policy	Minimise environmental impacts on ambient air quality on the Island
Performance Criteria	<ul style="list-style-type: none"> Compliance with all relevant statutory and approval requirements No fugitive emissions (including odour dust, smoke and fume emissions) causing, or likely to cause, an environment nuisance beyond the boundaries of the Project construction site No complaints from nearby residents or general community
Implementation Strategy	<ul style="list-style-type: none"> Advise potential sensitive receptors prior to commencement of construction activities that may cause dust emissions Golf course to be planted as soon as possible after clearing Construction activities to be staged to minimize disturbed areas Shade cloth (or hessian) barriers to be installed around all demolition areas Avoid undertaking clearing or soil stripping works during periods of high wind Vehicle speeds will be limited to 30 kilometres per hour on unsealed roads to minimise the potential for dust generation Cleared areas and access roads to be watered as required to limit fugitive dust (stormwater detained in temporary sediment basins will be used for this watering) Hydro-mulching (indigenous species) to be used to revegetate disturbed areas where possible and practical Any spoil stockpiles or exposed slope batters that are required to be in place for a long term to be covered, stabilised or moistened as required (through seeding with local stock, applying water, covering stockpiles with hessian or tarpaulins, etc.) to prevent generation of dust Controlled burns to be undertaken during suitable weather conditions to avoid disturbance to residents Construction equipment to be maintained in good repair, including exhaust systems and emission control devices. Service records and machinery prestart records are to be maintained Toilet facilities and sewerage treatment facilities to be set up prior to construction commencing and checked regularly to avoid malfunctions and odour generation Wastes to be collected in appropriate bins. Food scrap wastes to be removed from the Island a couple of times a week to avoid odour generation, particularly in the summer months
Monitoring and Auditing	<ul style="list-style-type: none"> Environmental checklist to be completed by the Environmental Manager Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> Monthly environmental report to be submitted to the Proponent by Environmental Manager

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Element / Issue	Description
	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or an incident • Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.7 Noise and Vibration

Element / Issue	Description
Operational Policy	Minimise environmental impact of noise and vibration
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all relevant statutory and approval requirements • No exceedance of Project specific noise criteria at sensitive receptors • No complaints from residences or community in relation to noise emissions
Implementation Strategy	<ul style="list-style-type: none"> • A <i>Noise and Vibration Management Plan</i> will be developed prior to construction based on Australian Standard AS2436-2010 <i>Guide to noise and vibration control on construction, demolition and maintenance sites</i> • Construction operations for noisy activities will be based upon the <i>Environmental Protection (Noise) Policy 2008</i> and limits will be placed on work hours to reduce noisy activities. • Noise barriers to be used where appropriate • Prior to noisy construction activities or activities that could impact access, 48 hours notification must be given to Island residents including details of: <ul style="list-style-type: none"> ○ progress of construction ○ upcoming noisy activities ○ any activities outside normal working hours ○ efforts being made to minimise noise • A publicly available contact number for handling concerns about the potential noise impacts of construction of the development; • Maintain awareness of construction workers in relation to minimising noise impacts from equipment operation • Noise generating activities audible at sensitive receptors to be restricted in accordance with the <i>Environment Protection (Noise) Policy 2008</i> • All equipment and machinery to be maintained in good operating condition and be fitted with appropriate noise attenuation devices. Wherever practicable machines will be switched off when not in use • All combustion engine plant, such as generators, compressors and welders to be checked during daily prestart to ensure they produce minimal noise • All vehicle panels and covers of silenced plant to be kept shut • Fixed plant and equipment to be sited as far as practical from noise sensitive receptors • Plant equipment tests and other elevated noise events to be performed during daytime working hours or where negotiated in advance with residents and authorities • Marine vessel movements to be managed during construction to avoid unnecessary noise disturbance to island residents
Monitoring and Auditing	<ul style="list-style-type: none"> • Environmental checklist to be completed by Environmental Manager • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent

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Element / Issue	Description
Reporting and Corrective Action	<ul style="list-style-type: none"> • Monthly environmental report to be submitted to the Proponent by Environmental Manager • Any noncompliance with performance criteria shall be documented as an incident or a near-miss • Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.8 Waste

Element / Issue	Description
Operational Policy	Minimise the environmental impact of waste generation with the maximization of product reuse, recycling and correct disposal
Performance Criteria	<ul style="list-style-type: none"> • No unauthorised waste disposal • Promote and adhere to waste minimisation and recycling principles • No contamination of soil, air or water as a result of inappropriate waste management • No shipped-sourced pollution
Implementation Strategy	<ul style="list-style-type: none"> • A <i>Waste Management Plan</i> to be developed for the construction of the Project which identifies: <ul style="list-style-type: none"> ○ waste streams produced and separate storage areas allocated for disposal ○ storage and disposal locations with key design modifications considered and implemented to deny access to fauna species ○ key disposal locations for hydrocarbon contaminated waste ○ opportunities and actions for recycling ○ training and management ○ a monitoring and reporting program • Waste segregation will be undertaken to ensure recoverable wastes are recycled and that trackable and/or regulated wastes are appropriately disposed • All bulk waste storage facilities will be located at least 50 metres from any watercourse or drainage line • All employees and contractors will be trained in the correct waste disposal procedures and encouraged to recycle • Waste collection bins to be located in easily accessible areas and to be clearly labeled • Wastes unable to be reused or recycled must be disposed of at an approved Council landfill on the mainland via a marine vessel which is not carrying passengers (for hygienic reasons) • Regulated wastes will be stored in appropriately sealed and labeled containers • A licensed waste contractor must be engaged to transport and dispose of all regulated waste • No release of ballast water except under port or harbor guidelines • No unauthorised disposal of ship waste (sewage, domestic garbage or oil) • All vessels are to be equipped with hydrocarbon spill kits • Each vessel is to have a spill management plan specific to the cargo
Monitoring and Auditing	<ul style="list-style-type: none"> • Types and quantities of waste generated per month is to be recorded by the Environmental Manager • Environmental checklist to be completed by the Environmental Manager • Monitoring of execution of implementation strategies is to be undertaken by Environmental Manager and reported to Construction Manager or Resort Manager

Great Keppel Island – Environmental Management Plan

Element / Issue	Description
	<ul style="list-style-type: none"> • Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> • Monthly environmental report to be submitted by Environmental Manager • Any noncompliance with the performance criteria shall be documented as a near miss or an incident • Corrective action will be undertaken in consultation with the Environmental and Construction Manager or Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.9 Transport

Element / Issue	Description
Operational Policy	Minimise environmental impacts to the public road network associated with traffic generated by construction and operation activities by the Project
Performance Criteria	<ul style="list-style-type: none"> • Minimal traffic-related complaints, near misses and incidents both on and off-site • Minimal impact on existing transport infrastructure
Implementation Strategy	<p>Road Traffic</p> <ul style="list-style-type: none"> • A <i>Mainland Road Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ deliveries, road closures, notifications, safety, escort requirements, signage, parking, weight restrictions, minimization of impacts to traffic • An <i>Island Road Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ upgrade works, new road development, speed zones, pedestrian crossing, private vehicle access, road closures, notifications, signage, lighting restrictions and road furniture • Dangerous goods will be transported in accordance with regulatory requirements including <i>Environment Protection (Waste Management) Regulation 2000</i> and Australian codes depending on volumes • Project personnel are to be trained in appropriate traffic management practices <p>Vessel Traffic (Shipping)</p> <ul style="list-style-type: none"> • A <i>Vessel Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ temporary mooring and anchorages ○ barge and tugs movements ○ delivery of materials (types, quantities, source, time of deliveries) • Installation of vessel navigation aids as defined by Maritime Safety Queensland • No release of ballast water except under port or harbour guidelines • No unauthorised disposal of ship waste (sewage, domestic garbage or oil) • All vessels are to be equipped with hydrocarbon spill kits • Each vessel is to have a spill management plan specific to the cargo • Boats are only to land and moor in designated areas • Dangerous goods will be transported in accordance with regulatory requirements
Monitoring and Auditing	<ul style="list-style-type: none"> • Environmental checklist to be completed by the Environmental Manager • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Monthly environmental report to be submitted to the Proponent by Environmental Manager • Any noncompliance with the performance criteria shall be documented as an incident or a near-miss

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Element / Issue	Description
	<ul style="list-style-type: none"> • Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.10 Non Indigenous Cultural Heritage

Element / Issue	Description
Operational Policy	Protect the non-indigenous heritage values on the Island
Performance Criteria	<ul style="list-style-type: none"> • Compliance with the requirements of the <i>Queensland Heritage Act 1992</i> and the <i>GKI Land Management Plan</i>
Implementation Strategy	<ul style="list-style-type: none"> • Photographic records of the existing resort and its structures are to be undertaken before the commencement of construction activities. Research into the existing resort including the following: <ul style="list-style-type: none"> ○ production of site plan/scaled drawings ○ individual building plans (where warranted) ○ the collation of an oral history of the resort and Island and the collation of additional written material regarding the resort and the Island such as redevelopment/refurbishment plans, photographs, advertising material, pamphlets, unpublished papers and articles • Areas of non-indigenous cultural significance to be clearly marked on maps and on the ground, either by fencing or temporary barricading • Management of the Leeke's Homestead in accordance with the <i>Queensland Heritage Act 1992</i> (QHA) including <ul style="list-style-type: none"> ○ the preparation of a Conservation Management Plan which includes a structural assessment ○ the preparation of a landscape and tree management plan ○ the relocation and appropriate storage, in a dry, vermin proof area, of the documents and diary logs from Leeke's Homestead which were in 2008 when the resort closed ○ the removal of the hoop pine which is impacting the southwest corner of the homestead under the Emergency Works provision of the QHA • A cultural heritage assessment of the Island's Lighthouse is to be conducted and the current, provisional, cultural heritage significance rating is to be verified • The site identified as likely to contain evidence of the original pastoral homestead and a 50 metre buffer around this site is to be delineated with appropriate fencing and is to remain undisturbed • Any sites that are discovered during construction activities that are believed to be of non-indigenous cultural significance are to be reported and all works are to cease in that area until an appropriate investigation is conducted
Monitoring and Auditing	<ul style="list-style-type: none"> • Checklist to be completed by the Environmental Manager • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager • Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any signs of disturbance to identified heritage structures will be reported immediately • Monthly environmental report to be submitted to the Proponent by Environmental Manager • Any noncompliance with performance criteria shall be documented as an incident or a near miss • Corrective action will be undertaken in consultation with Construction Manager • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.11 Indigenous Cultural Heritage

Element / Issue	Description
Operational Policy	Protect the Indigenous cultural heritage values on the Island
Performance Criteria	<ul style="list-style-type: none"> Compliance with the requirements of the <i>Aboriginal Cultural Heritage Act 2003</i> and the <i>Cultural Heritage Management Plan (CHMP)</i> Compliance with the requirements of the <i>Queensland Heritage Act 1992</i>
Implementation Strategy	<ul style="list-style-type: none"> CHMP to be followed Areas of cultural heritage significance to be clearly identified prior to commencement of construction activities Site induction to include cultural heritage awareness and duty of care If any item of potential indigenous heritage is identified during construction, works will cease immediately in the vicinity of the find. The find will be notified to the Environmental Manager who will organize with the Traditional Owners an investigation for significance and future management by suitably qualified persons
Monitoring and Auditing	<ul style="list-style-type: none"> Environmental checklist to be completed by the Environmental Manager Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> Any signs of disturbance to artefacts will be reported immediately Monthly environmental report to be submitted to Construction Manager by Environmental Manager Any noncompliance with the performance criteria shall be documented as a near miss or an incident Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.12 Emergency Planning

Element / Issue	Description
Operational Policy	Ensure that project personnel can effectively respond in the event of an emergency
Performance Criteria	<ul style="list-style-type: none"> Specific Project emergency plans are developed and put in place Project personnel are fully aware of the emergency plans and required procedures and responsibilities in the event of an emergency
Implementation Strategy	<ul style="list-style-type: none"> Each contractor shall have in place an emergency muster point for their work area Emergency response training is to be included in the site induction (employees, contractors and tourists) and regularly refreshed Additional training is to be provided to personnel with specific emergency response accountabilities Evacuation plans shall be developed to ensure all people can be safely evacuated in the event of an emergency such as severe cyclone or fire The requirements of the evacuation plan and procedures for communicating advice on cyclone threats, fires, etc. will be presented during staff inductions Prior to construction works commencing on the Island, a <i>Bushfire Management Plan</i> shall be prepared in accordance with <i>State Planning Policy 1/03: Mitigating the Adverse Impacts of Bushfire, Landslide and Flood</i>. This shall include identification of adequate water supply sources for firefighting purposes
Monitoring and Auditing	<ul style="list-style-type: none"> Emergency response drills will be undertaken as appropriate and the effectiveness of the emergency response plan will be evaluated

Element / Issue	Description
	<ul style="list-style-type: none"> Emergency response and control equipment (e.g. fire extinguishers) are to be reviewed / audited at regular intervals in accordance with relevant Australian standards Environmental checklist to be completed by the Environmental Manager Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager; and Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> An emergency response training register is to be maintained and kept up to date, highlighting roles and responsibilities of trained personnel Monthly environmental report to be submitted to the construction manager by Environmental Manager Any noncompliance with the performance criteria shall be documented as an incident Corrective action will be undertaken in consultation with the Environmental Manager and the Construction Manager and any relevant authorities A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

2.13 World Heritage and Scenic Amenity

Element / Issue	Description
Operational Policy	Ensure that World Heritage values and scenic amenity are not significantly impacted
Performance Criteria	<ul style="list-style-type: none"> Maintain compliance with all relevant statutory and approval requirements No significant deterioration in World Heritage Values No significant impact on scenic amenity
Implementation Strategy	<ul style="list-style-type: none"> Ensure scenic amenity is managed including the following design components: <ul style="list-style-type: none"> Marine Services Precinct <ul style="list-style-type: none"> development in this precinct will occupy only a small proportion of the Island's coastline, it will affect a relatively limited Landscape Setting No buildings on the marina breakwaters, and building height will be below the elevation of Putney Point hence will be screened from Leeke's Beach the visual impression of the combined marina breakwaters, moored boats, shops and apartments will be a long curving cluster of built forms of moderate height fitting into a corner of the bay, such that only part of the complex will be visible from within the Putney Beach Landscape Setting variation in height, scale and groupings of buildings to avoid the appearance of a wall of uniform built form generally subdued colours and tones to enhance visual integration with the headland and forested mountain backdrop narrow vertical elements (e.g. waterfront & street lighting, flagpoles) to reinforce the verticality of yacht masts and break up the appearance of buildings behind maximum use of bollard lighting, and where necessary downward-directed mast lights with minimal glare, below the height of the Putney Point ridge, and (apart from Marina entry lights) inside a line drawn between Putney Point and the trees on the Sand Spit Clam Bay and Fisherman's Beach Precincts <ul style="list-style-type: none"> clearing and earthworks for greens and fairways will be restricted to land below 60 metre elevation and 3% slope bands of trees retained across the golf course to reduce external

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Element / Issue	Description
	<p>views of the fairways</p> <ul style="list-style-type: none"> ○ fairways will be integrated with adjacent native vegetation on foothills and watercourse buffers by informal edges of local native plant species ○ sections of walking trails which potentially overlook the golf course and villas (e.g. ridgetop trails which pass through vegetation gaps or stunted vegetation) will be screened with supplementary planting where necessary ○ with respect to the villas and the Golf Course Facilities building, visual impact mitigation measures at the Design Phase include: <ul style="list-style-type: none"> ▪ building height restricted to two storey's above ground ▪ design controls on roof form, articulation, fenestration and colours; and on retaining walls, as detailed in the Visual Assessment Technical Report ▪ bands of retained trees, supplemented by screen planting and street trees ▪ for the clubhouse building, a built form which is fitted into the hill with a flat or low profile skillion roof, a stepped back second storey and screen planting ▪ reflective solar panels which are visually unobtrusive and screened (in terms of long distance offshore views) by tree canopies ▪ flatter and darker roofs ▪ buildings partly suspended or cantilevered out from the hillside and height controls to give a visual impression of no more than 3 levels and avoid a 'stacked' appearance ▪ effective landscape planting for visual integration ▪ non-bulky buildings with tropical design elements and controls on roof form, articulation and colours, integrated with their landscape and relating visually to their setting ▪ road alignment will avoid linear hillside scarring perpendicular to contours and within view of sensitive receptors and external viewpoints ▪ road cuttings on hillsides in areas of Low or Very Low VAC will minimise vegetation clearing and earthworks footprint by dark-coloured retaining walls with planted terraces, soil nailing or gabion supports, instead of vegetated cut batters <ul style="list-style-type: none"> ● The area of bare earth exposed at any one time, and the period of exposure, will be minimised ● All work areas including laydown yards, stockpile areas and waste storage areas must be inspected regularly to ensure good housekeeping ● Waste is to be disposed of in skips or bins with lids to be kept closed at all times to prevent rubbish being blown offsite ● Visual screening in the form of retained vegetation or green shade cloth will be used to surround work areas ● Earthworks will be shaped to create surface variation with a natural appearance ● Earthworks causing exposed hillside will be promptly revegetated, as will the fill embankment behind Putney Beach, with rehabilitation designed as irregular patches
Monitoring and Auditing	<ul style="list-style-type: none"> ● Environmental checklist to be completed by the Environmental Manager ● Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager

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Element / Issue	Description
Reporting and Corrective Action	<ul style="list-style-type: none">• Environmental Manager to conduct monthly audit against performance criteria• Monthly environmental report to be submitted to the Proponent by Environmental Manager• Any noncompliance with the performance criteria shall be documented as an incident or a near-miss• Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities• A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3 Operations Environmental Management Plan

3.1 Climate Change

Element / Issue	Description
Operational Policy	Operation of the Project in a manner that minimises carbon emissions
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all relevant statutory and approval requirements • Energy efficiency of plant, vehicles and equipment • Minimise environmental impacts of natural hazards and climate change
Implementation Strategy	<ul style="list-style-type: none"> • Minimise carbon emissions through appropriate use and selection of operational plant, vehicles and equipment • Fuel consumption, type and energy use must be monitored and reported monthly to the Proponent • Renewable electricity supply will be generated from solar photovoltaic cells installed on the roof tops of villas and other resort buildings • Natural hazard evacuation plans will be developed and all staff inducted
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring by Resort Manager of fuel and energy consumption and report monthly to Environmental Manager • Environmental Manager to monitor re-vegetation activities on a monthly basis and report to the Proponent • Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities

3.2 Land

Element / Issue	Description
Operational Policy	Minimise the environmental impact upon soil by land contamination
Performance Criteria	<ul style="list-style-type: none"> • Minimal or no complaints received regarding impacts to land use • No increase in soil degradation • No release of contaminants to soil
Implementation Strategy	<p>Land Use and Human Activities</p> <ul style="list-style-type: none"> • Resort operator is to ensure that no inappropriate land use occurs in accordance with the <i>Erosion and Sediment Control Plan</i> • No 4WD allowed on the beaches (including Fisherman's Beach) after the opening of the marina. • Restrict beach and water sport activities to Fisherman's Beach <p>Soil Management</p> <ul style="list-style-type: none"> • All storm water management devices shall be regularly maintained to ensure effectiveness <p>Contaminated Land</p> <ul style="list-style-type: none"> • All storage of fuel and chemicals to comply with relevant standards and legislation including: <ul style="list-style-type: none"> ○ AS 1940 <i>The storage and handling of flammable and combustible liquids</i> ○ AS 3780 <i>The storage and handling of corrosive substances</i> ○ AS 4452 <i>The storage and handling of toxic substances</i> ○ Queensland Dangerous Goods Safety Management Act 2001 and Environmental Protection Act 1994 • Spill kits are to be located at point of storage and use of hazardous substances

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Element / Issue	Description
	<ul style="list-style-type: none"> All employees are to be trained in the use of spill kits and disposal of contaminated material Refuelling activities are only to be undertaken in designated areas
Monitoring and Auditing	<ul style="list-style-type: none"> Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> Any noncompliance with the performance criteria shall be documented as an incident or a near-miss Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities A record of any complaints, incidents and/or near misses is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.3 Nature Conservation

Element / Issue	Description
Operational Policy	Minimise the environmental impacts on abundance and distribution of marine and terrestrial flora and fauna and minimise the introduction and spread of pest species
Performance Criteria	<ul style="list-style-type: none"> Compliance with all statutory and approval requirements No unauthorised clearing of native vegetation or removal of marine plant species No introduction or spread of declared weeds and pest No introduction of exotic pest species in ballast water Eradication/reduction in numbers of pest plants and animals Mitigate the loss of significant flora and fauna species Minimise as much as practicable disturbance to marine fauna Preserve species within the Island's Environmental Protection Precinct
Implementation Strategy	<p>Terrestrial and Freshwater Flora and Fauna</p> <ul style="list-style-type: none"> Operate in accordance with the <i>Terrestrial and Freshwater Flora and Fauna Management Plan</i> Develop an <i>Airstrip – Bird Control Management Plan</i> which identifies the following – <ul style="list-style-type: none"> reduce bird attractant features near the airstrip including flowering and fruiting trees maintain grassed areas to have long grass (150-200mm long) to reduce numbers of waders, gulls, plovers etc. manage weeds that bird use for cover and replant with native shrubs ensure <i>Waste Management Plan</i> is being followed in critical areas adjacent to the airstrip so as not to attract wildlife to refuse locations No unauthorised clearing of vegetation is to occur Speed restriction within 30 kilometres per hour to prevent animal injuries Drive only on cleared tracks No domestic animals or firearms No deliberate lighting of fires without a permit Smoking only in designated areas Education program of visitors to be conducted in accordance with the <i>Terrestrial and Freshwater Flora and Fauna Management Plan</i> and the <i>Weed and Pest Management Plan</i>

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Element / Issue	Description
	<ul style="list-style-type: none"> • Monitor and survey the species composition within the Environmental Protection Precinct for research purposes • Identified shorebird habitats will be excluded from public access from October to March each year • Negotiate with relevant authorities and the community to enforce slow vessel speeds around the marina to reduce the disturbance to megafauna <p>Weed and Pest Animals</p> <ul style="list-style-type: none"> • Operate in accordance with the <i>Weed and Pest Animal Management Plan</i> • No domestic animals permitted within the Resort • All vehicles and plant must be washed down and weed hygiene declarations to be completed prior to arrival on the Island <p>Marine Flora and Fauna</p> <ul style="list-style-type: none"> • Operate in Accordance with the <i>Marine Flora and Fauna Management Plan</i> • No unauthorised activities • All activities within the marine environment shall be undertaken with due care for mega-fauna • Control of mooring, boat traffic, scuba diving and snorkeling activities to minimize physical damage to reefs and aquatic fauna <p>Lighting</p> <ul style="list-style-type: none"> • Low wattage directional shielded lighting during operation with minimal spill particularly to areas of potential habitat for nocturnal and light sensitive species • Light is to be directed to the ground wherever possible • All lights will be shielded to eliminate beach and skyward illumination • Lighting systems will be programmed to be extinguished for as long a period as possible during the night • External lights will be triggered by sensors where appropriate • Use of long wavelength lighting sources such as low-pressure sodium vapor lighting where possible • Eliminating unnecessary light sources • Use of low pole mounted or waist height and shielded lighting on beach access and public pathways • Lights to be placed behind natural screens such as trees where possible • Windows buildings facing the beach are to be tinted • Rehabilitation of low screening vegetation below buildings to block lights visible from beach level whilst maintaining views • Educating visitors of the potential impacts from household lighting during nesting season, such as the use of flyers during nesting season • During the turtle breeding and hatching season (September to April) a light exclusion zone must be in place as per permit conditions
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental and Resort Manager and any relevant authorities

3.4 Water Resources

Element / Issue	Description
Operational Policy	To reduce environmental impacts to surface water and groundwater quality and limit the requirements for water usage during construction.
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all statutory and approval requirements • Prevent contamination of surface and groundwater • Prevent impacts on downstream environments
Implementation Strategy	<p>Groundwater (back up emergency use only)</p> <ul style="list-style-type: none"> • Only authorised licensed bores are to be used • All bores are to be metered and usage recorded • Adhere to bore water permit conditions as specified by DERM • No storage of chemicals within 50 metres of a well-head • All stormwater and recycled water that is directly or indirectly discharged to natural waters is to be appropriately treated • A Sustainable Water Supply Strategy must be adopted. This will include: <ul style="list-style-type: none"> ○ installation of rainwater tanks ○ use of recycled water for irrigation and potentially toilet flushing ○ water supply connection to the mainland <p>Surface Water</p> <ul style="list-style-type: none"> • No storage of chemicals or refuelling activities to occur within 100 metres of a waterway • Stormwater within the operation area must be assumed contaminated and treated as wastewater for use on gardens and as dust control <p>Waste Water</p> <ul style="list-style-type: none"> • Wastewater is to be contained and treated onsite • Treated wastewater is to be reused where possible for activities such as golf course and grounds irrigation
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities

3.5 Coastal Management

Element / Issue	Description
Operational Policy	Reduce environmental impacts on coastal water quality, hydrodynamics and sedimentation
Performance Criteria	<ul style="list-style-type: none"> • Increase in visual amenity of the Putney Beach shoreline • No contamination of marine environments
Implementation Strategy	<p>Marine Water Quality</p> <ul style="list-style-type: none"> • No beach renourishment to occur without permit approval • No unauthorised dumping of waste products into marine waters • Operate maintenance dredging in accordance with the Dredge Management Plan
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities

3.6 Air Quality

Element / Issue	Description
Operational Policy	Minimise environmental impacts on ambient air quality of the local area
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all relevant statutory and approval requirements • No fugitive emissions (including odour dust, smoke and fume emissions) causing, or likely to cause, an environmental nuisance beyond the boundaries of the Island • No complaints from nearby residences or general community
Implementation Strategy	<ul style="list-style-type: none"> • Advise potential sensitive receptors prior to commencement of any activities that may cause dust emissions • Vehicle speeds will be limited on unsealed roads to minimise the potential for dust generation • Cleared areas and access roads to be watered as required to limit fugitive dust • Operational equipment to be maintained in good repair, including exhaust systems and emission control devices. Service records and machinery prestart records are to be maintained
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.7 Noise and Vibration

Element / Issue	Description
Operational Policy	Minimise the impact of noise and vibration on the surrounding community
Performance Criteria	<ul style="list-style-type: none"> • Compliance with all relevant statutory and approval requirements • No exceedance of Project specific noise criteria at sensitive receptors • No complaints from residences or community in relation to noise emissions
Implementation Strategy	<ul style="list-style-type: none"> • Consultation with potentially affected sensitive receptors will be undertaken prior to the commencement of any noisy activity • All equipment and machinery to be maintained in good operating condition and be fitted with appropriate noise attenuation devices. Wherever practicable machines will be switched off when not in use • All combustion engine plant, such as generators and compressors to be checked during daily prestart to ensure they produce minimal noise • All vehicle panels and covers of silenced plant to be kept shut • Fixed plant and equipment to be sited as far as practical from noise sensitive receptors • Designs to consider noise suppression • No motor boat or jet ski activities before 6am or after 6pm • All Island residents and tourists to be advised of large social events that may create night-time noise
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental and Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.8 Waste

Element / Issue	Description
Operational Policy	Minimise waste generation, maximise reuse and recycling and dispose of waste in an appropriate manner
Performance Criteria	<ul style="list-style-type: none"> • No unauthorised waste disposal • Adhere to waste minimisation principles • No contamination of soil, air or water as a result of inappropriate waste management
Implementation Strategy	<ul style="list-style-type: none"> • A <i>Waste Management Plan</i> to be developed for the Resort which identifies: <ul style="list-style-type: none"> ○ waste streams produced and separate storage areas allocated for disposal ○ storage and disposal with key design modifications considered and implemented to deny access to fauna species ○ installation of sediment and gross pollutant traps at key stormwater run-off locations ○ opportunities and actions for recycling ○ training and management ○ a monitoring and reporting program ○ purchasing policy that aims to minimize waste generated by commercial and residential waste purchases ○ composting facility

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Element / Issue	Description
	<ul style="list-style-type: none"> ○ colour-coded bin systems ● All bulk waste storage facilities and stockpiles will be located at least 50 metres from any watercourse or drainage line ● No putrescible waste within 50 metres of existing residential or tourist facilities ● No biosolid storage facilities within 200 metres of existing residential or tourist facilities ● Transportation of waste from the Island to the mainland will only occur by contractors licensed under the <i>Environmental Protection Act 1994</i> ● Waste segregation will be undertaken to ensure recoverable wastes are recycled and that trackable and/or regulated wastes are appropriately disposed ● All employees are to be trained in the correct waste disposal procedures ● Waste collection bins to be located in easily accessible areas and to be clearly labeled ● Wastes will be disposed of at an approved Council landfill ● Regulated wastes will be stored in appropriately sealed and labeled containers. A licensed waste contractor will be engaged to transport and dispose of all regulated waste
Monitoring and Auditing	<ul style="list-style-type: none"> ● Types and quantities of waste generated per month is to be recorded by the Environmental Manager ● Monitor bin capacity to determine if additional capacity is required ● Monitor evidence of litter and poor-house-keeping and determine extra bin facility locations ● Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager ● Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> ● Any noncompliance with the performance criteria shall be documented as a near miss or incident ● Corrective action will be undertaken in consultation with the Environmental and Resort Manager and any relevant authorities ● A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.9 Transport

Element / Issue	Description
Operational Policy	Minimise impacts to public road network associated with traffic generated by operation
Performance Criteria	<ul style="list-style-type: none"> ● Minimal traffic-related complaints and incidents both on and off-site (marine) ● Minimal impact on existing transport infrastructure ● No introduction of exotic pest species in ballast water ● No shipped-sourced pollution
Implementation Strategy	<p>Road Traffic</p> <ul style="list-style-type: none"> ● A <i>Mainland Road Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ Deliveries, road closures, notifications, escort requirements, parking, weight restrictions ● An <i>Island Road Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ Upgrade works, new road development, speed zones, pedestrian crossing, private vehicle access, road closures, notifications, signage, lighting restrictions, road furniture ● Project personnel are to be trained in appropriate traffic management practices

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Element / Issue	Description
	<p>Air Traffic</p> <ul style="list-style-type: none"> • An <i>Air Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ schedule and frequency of flights, airport safety, etc. • Limit the quantity of aviation fuel stored on the Island • Airstrip operations will be in accordance with Civil Aviation Safety Authority (CASA) requirements <p>Vessel Traffic (Shipping)</p> <ul style="list-style-type: none"> • A <i>Vessel Traffic Management Plan</i> will be developed addressing: <ul style="list-style-type: none"> ○ temporary mooring and anchorages ○ barge and tugs movements ○ delivery of supplies and materials • Installation of vessel navigation aids as defined by Maritime Safety Queensland • Boats are only to land and moor in designated areas • Dangerous goods will be transported in accordance with regulatory requirements and Australian codes depending on volumes
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any noncompliance with performance criteria to be documented as an incident • Corrective action will be undertaken in consultation with the Environmental and Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.10 Non Indigenous Cultural Heritage

Element / Issue	Description
Operational Policy	Protect the non-indigenous heritage values of the Project Site
Performance Criteria	<ul style="list-style-type: none"> • Compliance with the requirements of the <i>Queensland Heritage Act 1992</i> and the <i>Cultural Heritage Management Plan</i> (CHMP)
Implementation Strategy	<ul style="list-style-type: none"> • CHMP to be followed • Areas of non-indigenous cultural significance to be clearly marked on maps • Management of the Leeke's Homestead in accordance with the <i>Queensland Heritage Act 1992</i> • Any sites that are discovered during operation activities that are believed to be of non-indigenous cultural significance are to be reported and all works are to cease in that area until an appropriate investigation is conducted
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any signs of disturbance to artefacts will be reported immediately • Any noncompliance with the performance criteria shall be documented as an incident • Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.11 Indigenous Cultural Heritage

Element / Issue	Description
Operational Policy	Protect the indigenous cultural heritage values of the Project site
Performance Criteria	<ul style="list-style-type: none"> • Compliance with the requirements of the <i>Aboriginal Cultural Heritage Act 2003</i> and the <i>Cultural Heritage Management Plan (CHMP)</i> • Compliance with the requirements of the <i>Queensland Heritage Act 1992</i>
Implementation Strategy	<ul style="list-style-type: none"> • CHMP to be followed • Areas of cultural heritage significance to be clearly identified • Staff induction to include cultural heritage awareness • Potential heritage material (non-indigenous) identified during operation will be investigated for significance and future management by suitably qualified persons
Monitoring and Auditing	<ul style="list-style-type: none"> • Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager • Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> • Any signs of disturbance to artifacts will be reported immediately • Any noncompliance with the performance criteria shall be documented as a near miss or incident • Corrective action will be undertaken in consultation with the Environmental and Resort Manager and any relevant authorities • A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.12 Emergency Planning

Element / Issue	Description
Operational Policy	Ensure that Resort personnel can effectively respond in the event of an emergency
Performance Criteria	<ul style="list-style-type: none"> • Specific Project emergency plans are developed and put in place • Project personnel are fully aware of the emergency plans and required procedures and responsibilities in the event of an emergency
Implementation Strategy	<ul style="list-style-type: none"> • A detailed site specific emergency plan for Project operations is developed by The Proponent in consultation with the Department of Emergency Services and affiliated bodies. The <i>Emergency Response Plan</i> will consider: <ul style="list-style-type: none"> ○ emergency controls and alarms ○ communication arrangements and contact details ○ roles and responsibilities ○ first response procedures and first response equipment ○ evacuation procedures, site access and security ○ training requirements • Emergency response training is to be included in the staff induction and regularly refreshed • Additional training is to be provided to personnel with specific emergency response accountabilities • Evacuation plans shall be developed to ensure all persons can be safely evacuated in the event of a severe cyclone or fire • Adherence to the <i>Bushfire Management Plan</i> and adoption of planned fire regimes consistent with the <i>Fire and Biodiversity Consortium Guidelines</i>
Monitoring and Auditing	<ul style="list-style-type: none"> • Emergency response drills will be undertaken as appropriate and the effectiveness of the emergency response plan will be evaluated • Emergency response and control equipment (e.g. fire extinguishers) are to be

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Element / Issue	Description
	<p>reviewed / audited at regular intervals in accordance with relevant Australian standards</p> <ul style="list-style-type: none"> Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Resort Manager Environmental Manager to conduct monthly audit against performance criteria and report to the Proponent
Reporting and Corrective Action	<ul style="list-style-type: none"> An emergency response training register is to be maintained and kept up to date, highlighting roles and responsibilities of trained personnel Any noncompliance with the performance criteria shall be documented as a near miss or incident Corrective action will be undertaken in consultation with the Environmental Manager and Resort Manager and any relevant authorities A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required

3.13 World Heritage and Scenic Amenity

Element / Issue	Description
Operational Policy	Ensure that World Heritage values and scenic amenity are not significantly impacted
Performance Criteria	<ul style="list-style-type: none"> Maintain compliance with all relevant statutory and approval requirements No significant deterioration in World Heritage Values No significant impact on scenic amenity
Implementation Strategy	<ul style="list-style-type: none"> Visual screening in the form of retained vegetation Reflective solar panels on roofs should be located in positions and at angles where they will not be visually intrusive with respect to lookouts or external view sectors Maintain sections of walking track with supplementary screening to not be visible Maintain effective landscape planting for visual integration of resort Ensure any new buildings or facilities fit in with the specified design philosophy as specified in the <i>Visual Assessment Technical Report</i>
Monitoring and Auditing	<ul style="list-style-type: none"> Environmental checklist to be completed by the Environmental Manager Monitoring of the execution of the implementation strategies is to be undertaken by the Environmental Manager and reported to the Construction Manager Environmental Manager to conduct monthly audit against performance criteria
Reporting and Corrective Action	<ul style="list-style-type: none"> Monthly environmental report to be submitted to the Proponent by Environmental Manager Any noncompliance with the performance criteria shall be documented as an incident or a near-miss Corrective action will be undertaken in consultation with the Environmental and Construction Manager and any relevant authorities A record of any complaints and/or incidents is to be logged in the Incidents and Complaints Register (Section 1.8) along with any action taken as required



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