Cardno
Shaping the Future

SHUTE HARBOUR
MARINA

SHUTE HARBOUR MARINA RESORT

Environmental Impact Statement - Executive Summary

14 October 2008
Job No. 7800-41

Shute Harbour Marina Development Pty Ltd

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EXECUTIVE SUMMARY

The Background

Shute Harbour is and will always remain the central hub for marine traffic in the Whitsundays, due to its twin advantages of superior geographic proximity to the reef and resort Islands, as well as its natural safe anchorage. Shute Harbour and the current Shute Harbour Transit Facility play a critical role in the Whitsundays as the mainland 'face' that the Whitsunday Region, Queensland and Australia present to the local, national and international visitors seeking to experience the beauty of this region.

As a tourism destination of local and international renown, expectations of visitors to the Whitsundays are becoming more demanding and sophisticated. A high quality, environmentally conscious marine development is expected to ensure Shute Harbour maintains its role in the economy of the Whitsundays. The current "ad-hoc" nature of the commercial built form at Shute Harbour is not conducive to providing that objective.

The proposed development site was initially identified by government as being strategically located as a safe haven marina in the event of a cyclone and as a gateway to the Whitsunday Islands. As such, proposals for a marina development in the locality have existed since the 1980s. The site has been reported as the most strategically and environmentally appropriate marina site available in the region.

The Proposal

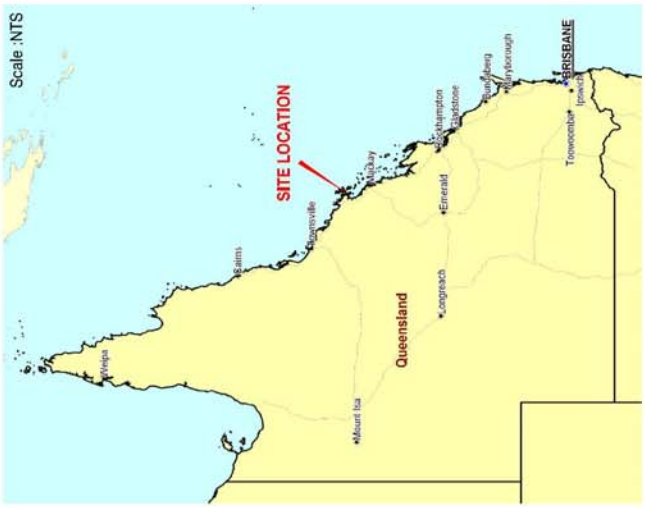
Shute Harbour Marina Development Pty Ltd (the Proponent) proposes the Shute Harbour Marina Resort (SHMR).

The SHMR has been designated as a "significant" project. In accordance with the provisions of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) the SHMR is introduced via this Environmental Impact Statement (EIS) prepared by Cardno (Qld) Pty Ltd, and addresses the Terms of Reference (ToR) prepared by the Department of Infrastructure and Planning on behalf of the Coordinator General issued in May 2007.

The SHMR development site is situated at Shute Harbour on Queensland's central coast. The project area is located 10km south-west of Airlie Beach. The SHMR site currently consists of land, intertidal areas and waters covering an area of 45.2 hectares across two leasehold titles described as Lot 2 on SP117389 and Lot 273 on HR 1757, and an area presently subject to a Permit to Occupy. The SHMR site locality is presented in Figure 1.

The SHMR development proposal is a result of planning studies, extensive community consultation and scientific investigations. It is a development which has proven support of the Traditional Owners with the Proponent offering a world class marina and tourist facility, capitalising on the geographic advantages of Shute Harbour, and providing a valuable addition to the region's marina and tourism offerings. This is in addition to enhancing the strategic importance of Shute Harbour by acting as a catalyst in the overall revitalisation and sustainability of the precinct.

SHUTE HARBOUR MARINA RESORT
ENVIRONMENTAL IMPACT STATEMENT



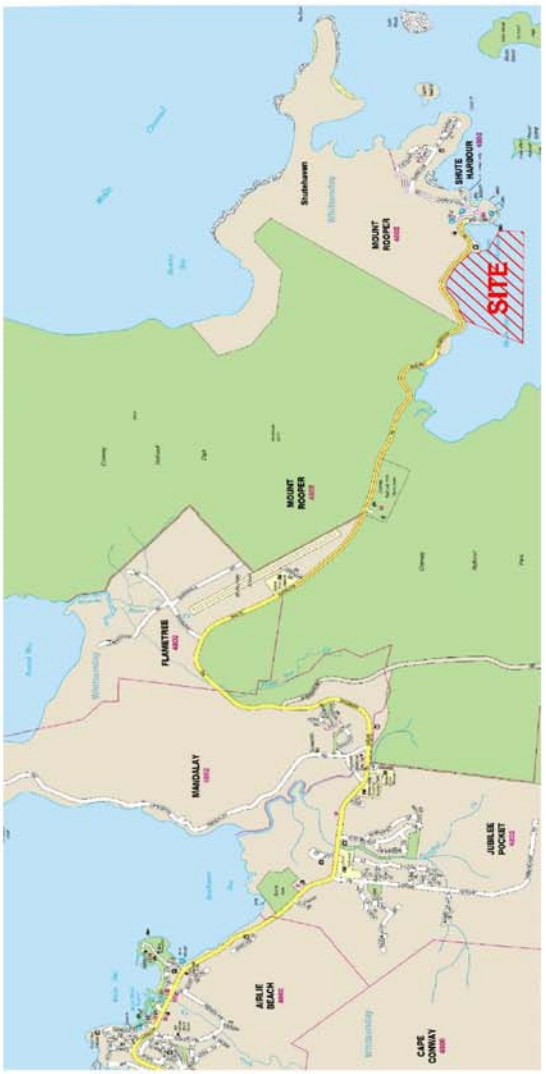


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FIGURE 1
LOCALITY PLAN

Project No.: 7800/41

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Rev: Orig. Date: 30 July 2008

Shute Harbour Marina Development Pty Ltd

The key elements of the SHMR can be described as:

- a solid breakwater marina housing 669 berths (including 193 multi hull berths) and sewerage pump out and refuelling facilities;
- resort accommodation including 4½ Star Hotel up to 5 storeys comprising 109 family suites;
- marina plaza precinct including a range of commercial retail and dining opportunities;
- managed resort accommodation precinct on 117 freehold allotments;
- charter boat base including purpose built facilities to support charter boat operations, co-located with a Marine Environment and Indigenous Cultural Heritage Centre;
- waterfront boardwalk network and breakwater parkland;
- marina office and amenities;
- realignment of Proserpine-Shute Harbour Road and construction of a new intersection;
- car parking facilities; and
- extensive landscaping.

The SHMR Master Plan is presented in Figure 2 with underlying rectified aerial photography. Figure 3 presents the SHMR Precinct Plan.


LEGEND:
PROPOSED LEASE BOUNDARY
EXISTING LEASE BOUNDARY
KEY:
MARINA (RL -4.2m)
MANAGED RESORT ACCOMMODATION
RESORT TOURISM
MIXED USE
- RESORT/TOURISM
- CHARTER BOAT BASE, CHANDLERY
- COMMERCIAL
- RESTAURANT
- MARINA OFFICE
- MARINA AMENITIES
MARINA ESPLANADE & PARK
CARPARK (UP TO THREE LEVELS)
FUEL DOCK & PUMP OUT FACILITY
BREAKWATER
PARK/FUTURE MARINA/RAMP
DREDGING SPOIL HANDLING AREA
SHUTE HARBOUR MARINA RESORT
ENVIRONMENTAL IMPACT STATEMENT
Scale 1:5000 (A3)
FIGURE 2
MASTER PLAN


FIGURE 3
PRECINCT PLAN
Scale 1:5000 (A3)
legend

A three dimension model of the proposed SHMR has been developed by V2i to support the EIS and illustrate the development in the context of the existing environment. Provided below are a selection of still perspectives from the three dimension modelling (the DVD of which is appended to the EIS).

SHMR Overall View (Oblique)

SHMR View from Southwest

The Boardwalk

Marina Berths

The Parkland and Isthmus

Streetscapes and Built Form

The Objectives

The objectives of the SHMR development are:

- to provide a world class integrated marina and tourism facility, providing a valuable addition to the marina and tourism offerings in the region;
- to enhance the strategic importance of the Shute Harbour precinct to the area by providing marine and tourism infrastructure in keeping with Shute Harbour's pivotal regional, State, National and International role;
- to support a vibrant and growing marine industry, that is underpinned by a variety of programs and policies implemented by all layers of government, and driven by consistently strong growth in recreational boating generating a shortage of marina berths throughout Queensland;
- to capitalise on the geographic advantages of Shute Harbour to improve the overall efficiency and experiences of marine interaction with the Whitsunday Island region;
- to design the built form to integrate with the natural environment providing an effective transition between the marina environment and the natural wooded backdrop;
- to respond to sustainable design principles, including passive climatic design, water management and storage, energy conservation and production and travel demand management;
- to help manage impacts of recreational boating in the Whitsundays;
- to provide a significant strengthening of the regional economy and employment;
- to ensure integration of land uses to provide a balanced, master planned marina resort environment;
- to protect the water quality of Shute Harbour;
- to improve linkages between the site and the transit terminal and the overall operation and perception of the precinct;
- to facilitate enhanced public transport linkages between Shute Harbour and Airlie Beach;
- to ensure the provision of high quality urban design standards for built form and landscaping, creating a coherent and sensitive overall design aesthetic;
- to protect important view corridors from Proserpine-Shute Harbour Road to nearby Islands;
- to provide a valuable addition to the social and recreational fabric of the region, providing a stronger community heart for Shutehaven residents and greater breadth of facilities for visitors to Shute Harbour;
- to provide public access to the Marina esplanade and Isthmus parkland, creating new foreshore access and views;
- to support Airlie Beach's role as the Whitsunday Island tourism hub;
- to increase the array of accommodation choices available to the community;
- to provide a long term management structure to maintain the marina and resort infrastructure at no cost to the community; and
- to further protect and communicate the site's indigenous and cultural heritage.

SHMR objectives align with a number of State and regional planning policies for the delivery of sustainable economic development that provides environmental, social and community benefits.

The EIS

Due to the SHMR designation as a "significant" project, the development proposal is subject to a rigorous assessment process within the State of Queensland and bilaterally with the Commonwealth Government. The EIS assessment process is presented schematically in Figure 4.

The purpose of this EIS is to provide information on the SHMR, and the nature and extent of potential environmental, social and economic impacts (direct, indirect and cumulative) arising from the design, construction and operation of the proposed SHMR. The approach to all aspects of the development has been based on the awareness of the critical need to respect and enhance the natural environment of the area. The EIS also provides information on the nature and extent of management measures proposed to ensure potential detrimental impacts are avoided or mitigated wherever possible.

Detailed technical studies and consultations with key stakeholders have been undertaken to ensure SHMR achieves balanced environmental, social, and economic benefits and addresses the ToR satisfactorily. Technical studies undertaken by qualified professionals to assist in the propose design, construction and operation of the SHMR development are detailed in the EIS. An outline of these studies is given below and set out in Table ES1. In addition, Figures and Drawings provided as part of the EIS illustrate a number of design, construction and operational concepts. The studies undertaken to develop the EIS include the following.

- Stakeholder consultation to provide a number of opportunities for government agencies and community members to participate in consultation and to learn about the SHMR and its potential benefits and impacts.
- Environmental, social, economic and demand assessments to demonstrate project need and assess potential alternatives.
- Net benefit assessment to determine the costs and benefits in each of the categories of economic, social and environmental impacts when assessed against economic, social and environmental criteria.
- Planning assessments to demonstrate the proposal's compliance with State, regional and local policy directions, including an approval strategy framework and a Development Code tailored to achieve the intent of development and provide for a long term management structure to maintain all resort assets at no cost to the public.
- Topographical, cadastral and bathymetric surveys to inform the development outline and navigable access.
- Ecological assessments to determine potential impacts on ecological values and identify mitigation measures to preserve aquatic and terrestrial ecological attributes within the site and the immediate surrounds.
- Geotechnical analysis to determine land use capacities.
- Infrastructure and utility assessments to determine existing capacity and upgrade requirements to adequately service the development.
- Road and marine traffic impact assessments to ensure safe navigational access and road safety at the site access, and to determine upgrade requirements and inform the internal road network design and improve current marine traffic management.

- Landscape character and visual impact assessment to protect and enhance visual amenity.
- Hydrological and hydraulic modelling for stormwater management to determine impacts on water resources and inform construction methodology and operational aspects.
- Coastal process analysis to determine the impact of a marina and dredging on the area's natural landscape and environmental attributes.
- Air, noise and waste assessments to determine potential environmental impacts (including environmental nuisance) and achieve policy directions.
- Cultural heritage assessments to determine impacts on indigenous and non-indigenous cultural heritage.
- Social and economic assessments to determine complimentary facilities and service types to meet community needs and expectations and principles of ecologically sustainable development.

Management plans for the construction and operation of the SHMR development proposal have also been prepared to respond to existing site conditions and protect and enhance environmental values within and adjacent to the site, transforming the recommendations contained within the technical studies to measurable performance indicators.

FIGURE 4
DEVELOPMENT ASSESSMENT PROCESS

Table ES1 EIS Appended Technical Studies

Topic	Author	Date	Appendix Reference
Terms of Reference	Coordinator General	May 2007	A
Proponent Details	Port Binnli	28 July 2008	B1
Study Team	Cardno Environment	July 2008	B2
EIS Planning Report	Conics Brisbane (formerly PMM)	July 2008	C
Initial Advice Statement	PMM	July 2006	D
Matters of National Environmental Significance	Cardno Environment	July 2008	E
Community Consultation	Three Plus	30 July 2008	F
Net Benefit Assessment	AEC Group	July 2008	G
Marina Demand Study	Pacific Southwest	August 2006	H1
Marina Demand Study Update	Pacific Southwest	February 2008	H2
Accommodation Demand Assessment	AEC	March 2008	H3
Geotechnical Summary	Cardno Ullman Nolan	May 2006	I1
Report on Acid Sulphate Soil and Sediment Contamination Investigation	Cardno Ullman Nolan	January 2005	I2
Acid Sulfate Soil Management Plan	Cardno Environment	31 July 2008	I3
Landscape Character and Visual Amenity Assessment	Yurrah Pty Ltd	17 July 2008	J
Traffic Impact Assessment	Cardno Eppell Olsen	July 2008	K1
Shute Harbour Marine Traffic Study	Thompson Clark Shipping	July 2008	K2
Electricity and Telecommunications Report	Lectel	29 July 2008	L
Water Supply and Sewerage Investigation	Cardno WS&S	7 July 2008	M
Stormwater Management Strategy	Cardno Lawson Treloar	11 January 2008	N
Coastal Processes Report	Cardno Lawson Treloar	11 January 2008	O
Aquatic Ecology	FRC Environmental	July 2008	P1
Marine Megafauna Impact Assessment and Management Plan	Natural Solutions	28 July 2008	P2
Terrestrial Ecology	Place Environmental	3 July 2008	Q
Road Traffic Noise Assessment	Cardno Environment	31 July 2008	R
Indigenous Cultural Heritage Investigation	Hornery Institute	March 2008	S1
Cultural Heritage Management Plan	Hornery Institute	13 April 2008	S2
Cultural Heritage Report	Northern Archaeology Consultancies	July 2008	S3
Socio-economic Impact Assessment	AEC Group	July 2008	T
Construction Environmental Management Plan	Cardno Environment	31 July 2008	U1
Waste Management Plan	Cardno Environment	15 July 2008	U2
Marina Site Based Management Plan	Cardno Environment	31 July 2008	U3
Cyclone Evacuation Plan	Cardno Environment	16 July 2008	U4

Stakeholder Consultation

The SHMR is a major proposed development for the Whitsunday area and the Proponent has used a multi-layered approach to consultation. Consultation activities have been directed to:

- government interests – Commonwealth, State and Whitsunday Regional Council;
- stakeholder interests – ranging from business and industry groups through to indigenous groups; and
- community interests – including community action groups, local interest groups, community liaison groups coupled with community information sessions and public displays to encourage local residents to have their say.

For all aspects, the approach entailed dissemination of detailed information about the project design and potential impacts to each of those groups through a range of media and communication techniques. The consultation process undertaken by Three Plus provided a number of opportunities for government agencies and community members to participate in consultation and to learn about the SHMR its potential benefits and impacts and provided the opportunity for feedback.

The Proponent is committed to the continuation of stakeholder consultation through construction, ongoing operation and maintenance of the SHMR.

Planning Processes and Standards

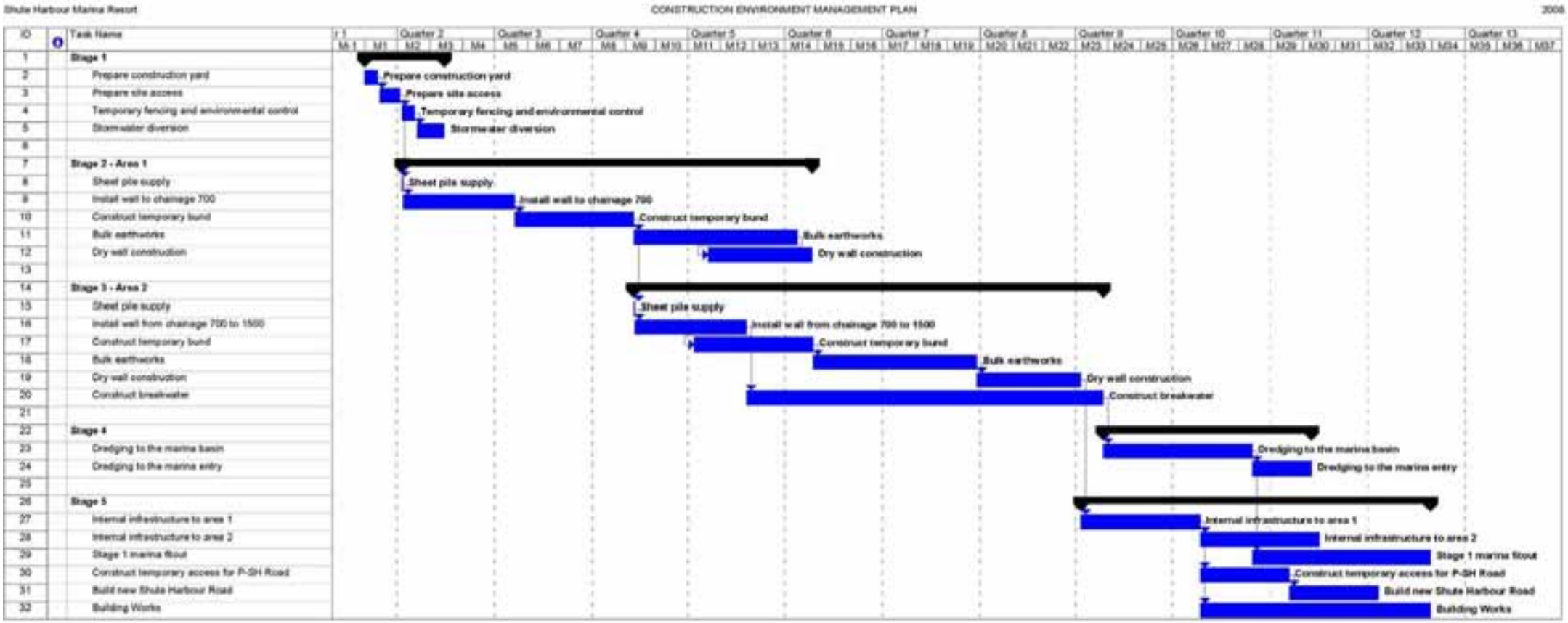
The design and assessment of the site is subject to an array of Commonwealth, State and Local legislation, plans and policies. Such instrumentation provides detailed guidance and considerations to be made regarding the manner in which any development must take place, and the criteria which need to be met in order to do so. The EIS has outlined this regulatory framework in detail to clarify the extent of relevant regulatory matters and to convey the manner in which the design and reporting has responded to this framework. It is concluded that the development meets the intent, and is in substantial compliance with all relevant regulatory mechanisms as detailed by Conics (July 2008) in the Planning Report.

Land use controls, to better respond to the attributes of the site, the surrounds and the development, have been specifically tailored and presented as the SHMR Development Code, which has incorporated elements of a range of codes included in the Draft IPA Planning Scheme for the Whitsunday Region.

The Proponent is committed to obtaining the relevant planning approvals for the construction and operation of the SHMR and comply with any reasonable and relevant development conditions.

An indicative timeframe for approvals and construction works is presented in the Gantt chart below.

SHUTE HARBOUR MARINA RESORT CONSTRUCTION WORKS PROGRAM



Need for the Development

The primary basis for the project is the continued strong growth in demand for marina berths. This demand is evident throughout Australia and internationally and is particularly strong in Queensland. The marina demand study by Pacific Southwest Strategy Group (PSSG) (August 2006, February 2008) provides evidence this demand exists in the Whitsunday region. A shortfall of 738 marina berths is predicted in 2010 and a shortfall of 3,133 marina berths by 2020.

While the need for a quality marina utilising the natural shelter of Shute Harbour forms the underlying rationale for the development, it is essential that a range of accommodation and other facilities are provided to complement and support the marina, such that the balance of uses work together in an integrated manner. The demand for Resort and Managed Resort Accommodation proposed for the development, in the context of current and future demand and supply projections, has been investigated in an Accommodation Demand Assessment by the AEC Group (March, 2008).

The need for the development at the proposed location has also been demonstrated over time with a series of proposals presented for the subject site. The suitability of the site has been demonstrated in a region wide marina demand analysis (Brown and Root, 2001) which ranked locations based on analysis of site selection issues (including environmental, engineering, location and planning considerations) and constraints. This methodology was developed for strategic planning purposes as a means of comparing and ranking a number of possible marina sites. The ranking of localities revealed Airlie/Muddy Bay and Shute Harbour leading the order of preference for development of marina facilities in the region. The Airlie/Muddy Bay marina is currently under construction, yet the demand for marina berths still outstrips supply in the region.

The Benefits of the Proposal

A central tenet of the approach to the SHMR development has been to ensure that clear net benefits are delivered by the project. This approach is considered to be essentially the most fundamental test regarding the relative merits of a project.

While this approach is used as a broad foundation for the project, a number of areas of State Government policy also specifically adopt this approach, and have adopted formalised definitions and methodologies to provide rigour around the reporting and assessment frameworks. The net benefit analysis also provides a ready means of deriving balanced conclusions from the detailed socio-economic analysis.

AEC has accordingly prepared a Net Benefit Assessment (July, 2008) to provide an analysis of the proposed SHMR in terms of its net benefit for the State of Queensland.

The quantitative cost benefit analysis found that the SHMR is expected to deliver:

- a total net benefit of $299.4 million in present value terms at a discount rate of 10% for direct impacts (i.e. incurred by the proponent) and 6% for indirect impacts (i.e. to stakeholders other then the proponent);
- a present value of benefits of $984.6 million and a present value of costs of $685.3 million;
- an overall benefit cost ratio (BCR) of 1.44 (i.e. returns $1.44 for every dollar spent in delivery of the project);
- a positive direct net benefit (i.e. to the proponent) in present value terms of $93.6 million with a BCR of 1.46; and
- a positive indirect net benefit (i.e. to stakeholders other then the proponent) in present value terms of $205.7 million with a BCR of 1.43.

The quantitative cost benefit analysis summary for direct, indirect and total impacts is tabulated below for economic, social and environmental criteria. The overall impacts of the project result in a clear net benefit.

Table ES2 Quantitative Cost Benefit Analysis Summary

Quantitative CBA Summary				
Impact	**PV of Benefits ($M)**	**PV of Costs ($M)**	**Net Present Value ($M)**	**BCR**
Economic				
Direct Impacts	$295.8	$202.2	$93.6	1.46
Indirect Impacts	$570.6	$461.4	$109.2	1.24
Total Impacts	$866.5	$663.6	$202.8	1.31
Social				
Direct Impacts	N/a	N/a	N/a	N/a
Indirect Impacts	$94.0	$0.0	$94.0	N/a
Total Impacts	$94.0	$0.0	$94.0	N/a
Environmental				
Direct Impacts	N/a	N/a	N/a	N/a
Indirect Impacts	$24.1	$21.6	$2.5	1.12
Total Impacts	$24.1	$21.6	$2.5	1.12
Total				
Direct Impacts	$295.8	$202.2	$93.6	1.46
Indirect Impacts	$688.8	$483.1	$205.7	1.43
Total Impacts	$984.6	$685.3	$299.4	1.44

The benefits of the SHMR to Stakeholders (other than the Proponent) have been summarised below.

Economic Benefits

- Increased business activity at SHMR.
- Increased business activity outside SHMR.
- Appreciation of property values.
- Enhancing networking and linkages in the marine sector.
- Increased business confidence (investor attraction).
- Tourism support.

Social Benefits

- Increased amenity from lease of marina berths.
- Maintenance of the recreational value of the Great Barrier Reef World Heritage Area.
- Recognition of cultural heritage values.
- Contribution of a $2.5M to a new public boat ramp and car parking facility.
- Improved access to areas for recreational and leisure activity.
- Additional employment opportunities.

Environmental Benefits

- Increased habitat from development of breakwater, piles, pontoon and revetment walls.

- Re-establishment of seagrass from relocation of swing moorings and replacement with moorings that minimise impacts to seagrass.
- Increased mangrove habitat along the western fringe of the isthmus from replanting and natural colonisation.
- Maintenance of the environmental and ecosystem services of the Great Barrier Reef World Heritage Area by the creation of a "Reef Conservation Fund" of an initial $1M and annual contributions of $150,000 in perpetuity.

The proposed SHMR development has been assessed to provide a net benefit for the State of Queensland with any costs associated with the project being outweighed by the total benefits provided in each of the categories of economic, social and environmental impacts.

The Alternatives

A series of alternative development options have been considered via the analysis of positives and negatives of previous detailed proposals which had been assessed at the SHMR site, as well as throughout this EIS process. The current proposal has benefited from and been adjusted via this detailed analysis. It is considered that the current proposal represents the highest and best use of the site, with design details optimized to provide an integrated, master planned development in balance with the importance, beauty and environmental sensitivity of Shute Harbour.

The consequence of not proceeding with the current development proposal has also been considered as an alternative to the current proposal. If taken literally, and the entire development did not proceed, the impacts across the triple bottom lime arise for the region as there are no other sites which could provide comparable benefits. The Whitsundays would miss an opportunity to advance its identity and quality of life through the tourism economy and conserve the area's natural landscape and environmental values, on which the region's growth is ultimately dependent.

Existing Environmental Values and Potential Impacts

The function of this section is to provide an overview of the EIS by:

- describing existing environmental values of the area which may be affected by the SHMR proposal;
- describing the potential adverse and beneficial impacts of the SHMR proposal on the identified environmental values; and
- describing the management strategies to be used to ensure the potential adverse impacts on environmental values are minimised where practicable.

<u>Land</u>

The geology of the area is typical of the surrounding Whitsunday area, comprising volcanoclastic sediments interlain with intermediate volcanic flows and minor intrusions. The rocks form part of the Whitsunday Volcanic Province, an early Cretaceous aged sequence. Changes to relative sea and land levels have resulted in the area becoming drowned during the Tertiary Period. Overlying the basement rock at and below the shoreline is recent to Holocene aged marine sediments. The potential land contamination has been assessed as low because the site is largely undeveloped.

The SHMR site currently consists of land, intertidal areas and waters covering an area of 45.2 hectares across two leasehold titles and an area presently subject to a Permit to Occupy. The proposed site includes the existing lease area and15.9 hectares currently held as a Permit to Occupy, with approximately 4 hectares of the existing lease north of

Proserpine-Shute Harbour Road proposed to be returned to public ownership. The total lease area after consolidation is approximately 41.1 hectares.

The existing cadastral boundaries and land elevation contours, and land form design on which the SHMR is to be constructed are illustrated in the list of Figures. Drawings describing the civil design and construction of the SHMR have also been prepared and are presented in Volume 1 of the EIS.

The SHMR site abuts and is framed by Conway National Park, and the vegetated hillsides and the views to nearby islands over Shute Harbour provide an outstanding natural backdrop and outlook. The tidal lands and waters are within the Habitat Protection Zone of the Queensland *Great Barrier Reef Coastal Marine Park,* with part of the site within the outer margin of the Great Barrier Reef World Heritage Area as illustrated below.

The landform and terrain features present within the Shute Harbour locality have high environmental values. The existing landscape character assessed by Yurrah Pty Ltd describes the existing landscape character of the site as being largely influenced by previous and current land uses within and adjacent to the site. Adjacent land uses display a varied landscape character which is described as a heterogeneous mix of natural, semi-natural, tourism-orientated and port industrial landscape character values.

The potential impacts identified as a result of the proposed construction and operation of the SHMR development, relating specifically to land matters, include the following.

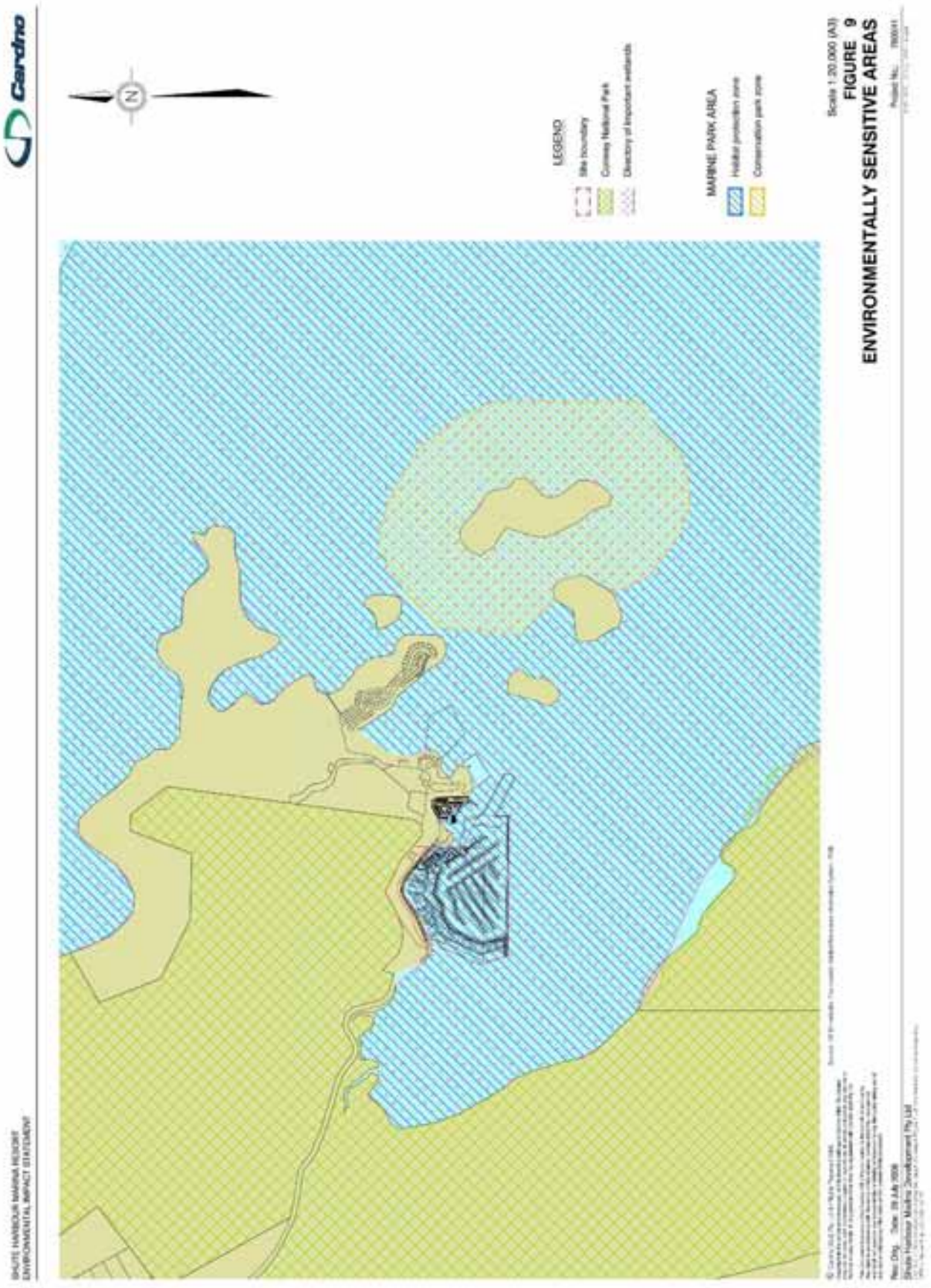
- Risk of subsidence/failure of geotechnically weak materials resulting from fill placement and excavation.
- Disturbance to land from vegetation clearing (for example mangroves), topsoil removal and excavation of surface soils as part of bulk earthworks to achieve the desired landform for construction of built form.
- Increased risk of erosion and sedimentation from land disturbance during rainfall, overland flow and from wind action/wave action during construction.
- Degradation of the marine environment within the marina, particularly hardening of substrate, loss of seagrass communities and decreased water quality from land disturbance and potential soil contamination during construction.
- Exposure of potential acid sulfate soils during construction and maintenance dredging episodes.
- Increased risk of contamination of soil and/or marine sediments during the operational phase.
- Impacts on landscape character and visual amenity during construction and operation.

Both construction and operational impacts from the SHMR development as they relate to land matters have been addressed through civil engineering, environmental management strategies (including sediment and erosion control mechanisms, bunding, soil remediation) and purposely located built form to maintain view corridors.

The Proponent has committed to the following.

- Staging construction to successfully manage impacts on areas of conservation significance surrounding the site by reducing the land disturbance at any one time and reducing the potential for erosion and sedimentation. This includes programming construction such that major earthworks are undertaken in the drier months of the year.

- All necessary measures will be implemented to control impacts related to land disturbance during construction of the SHMR development, including erosion & sediment control, water quality management, traffic, noise, dust, cultural heritage and impacts on flora & fauna. Mitigation strategies are specified in detail in the Construction Environmental Management Plan.
- Measures have been specifically nominated to manage maintenance dredging works with an emphasis on water quality monitoring for the protection and enhancement of areas of conservation significance surrounding the site and the ongoing establishment of ecological communities within the marina basin as an off set to habitat loss. Mitigation strategies are detailed in the Marina Site Based Management Plan.
- Provision of landscape buffers along Proserpine-Shute Harbour Road between the commercial areas of the marina and the existing motel as illustrated in the Master Plan.
- Relinquish land north of Proserpine-Shute Harbour Road back to public ownership improving the buffer between Conway National Park and the SHMR site.
- Identify, treat and manage potential acid sulfate soils during works in accordance with the Acid Sulfate Soil Management Plan even though contamination investigations have not recorded the presence of actual or potential acid sulfate soils.
- Provide power, water, sewer, stormwater drainage and telecommunications, and upgrade power supply, a financial contribution for which will be provided by the Proponent.


Cardno
N
LEGEND
MARINE PARK AREA
Scale 1:20,000 (A3)
FIGURE 9
ENVIRONMENTALLY SENSITIVE AREAS

Transport

The site will be accessed by land using Proserpine-Shute Harbour Road which provides the only main connection to the site from the Bruce Highway, past Airlie Beach.

No pedestrian paths, bicycle lanes or bicycle awareness zones are provided by the existing road network and the existing verge is used for limited overflow parking for cars with boat trailers. This is due to a high demand for recreational fishing and a lack of parking amenities in the area.

No impacts on road traffic are expected from the introduction of the SHMR with traffic modelling demonstrating the existing network has the capacity to accommodate the development's traffic generation, taking into account a proposed upgrade to Proserpine-Shute Harbour Road.

Intersection analysis was undertaken to determine the capacity of a single unsignalised T-intersection such as that proposed to access the SHMR. Site access via an unsignalised T-intersection was deemed sufficient to cater for development volumes in the year 2022.

The site will be accessed by water through an existing channel that leads northeast from the commercial wharves associated with the Shute Harbour Transit Facility, past Low Rock (which is marked by cardinal marks) and into the Molle Channel, which is utilised by the majority of marine recreational and commercial vessels. Sea access to the SHMR shall be from the entrance at the southeast corner of the marina.

The Proponent has committed to the following mitigation measures.

- Upgrade to the section of Proserpine - Shute Harbour Road adjacent to the development incorporating a realignment, a new design surface, 2 metre shoulders and median strip with kerbing, dedicated area for future possible road widening to three lanes to improve road safety, congestion and travel times, including a new intersection to access the SHMR site, and new culverts for enhanced drainage.
- Include as part of the development sufficient car parking and financially contribute to additional car parking as part of the new public boat ramp to alleviate the deficiency in car parking at Shute Harbour.
- Facilitate enhanced public transport linkages between Shute Harbour and Airlie Beach by designing and constructing a potential bus lay-by area.
- Facilitate coastal access by designing and constructing a pedestrian boardwalk along the water frontage and pedestrian pathways along the two main internal collector roads to improve public access to coastal waters.
- Financially contribute to a new public boat ramp and trailer boat parking to enhance the Shute Harbour precinct as a memorable gateway to the Whitsunday Islands and Great Barrier Reef.
- Provision of a solution to separate commercial and recreational marine traffic to enhance safety by minimising the risk of collision by vessels on reciprocal courses entering and leaving Shute Harbour simultaneously, including locating navigational aids.
- Relocate 57 standard swing moorings and replace these with low impact to seagrass moorings.

Climate

Shute Harbour is located at latitude 20° 17.65' S, above the Tropic of Capricorn, with a climate typical of a sub-tropical location. A wet season is generally experienced between

January and March and a dry season between August and October. Located in a sub-tropical coastal location, the proposal site encounters various climate extremes such as cyclones and storm surges.

The impact of extreme climatic conditions has been an important consideration throughout the design of the project. No potential adverse impacts to built form from such conditions are anticipated.

Water Resources

The existing catchment area draining to Shute Harbour is predominantly natural vegetation with extensive areas of National Park. Hence, with the exception of the small area of existing harbour activities and Proserpine-Shute Harbour Road, water quality of existing run-off is good. During the wet-season, water run-off is likely to carry increased sediment levels.

Given the inferred geology of the coastal hillside of the site, it is expected that the dominant groundwater components are associated with an ephemeral shallow (near ground surface) groundwater, which may exist depending on seasonal climatic conditions. Existence of this shallow groundwater is expected to be more predominant in low-lying or discharge areas of the hillside, where interaction with deeper, rock bearing groundwater may occur due to upward leakage.

No negative impacts on the water resources (surface and ground waters) are expected from the SHMR construction and operation. There will be beneficial impacts by diverting stormwater runoff from upper catchments through a grassed drain to polish waters that previously flowed directly to Shute Bay carrying sediments from the National Park and potential contaminants from the existing road network.

Coastal Environment

While the Mackay-Whitsunday region contains a wide range of coastal resources, each with significant values and management pressures, specific Environmental Values (EVs) for Shute Bay and the Coral Sea have not been formally established. Shute Bay and ultimately the Coral Sea form the receiving environment for the proposed SHMR. From a range of literature, a study of EVs for similar water bodies, and consultation with relevant government agencies at State and Federal level, the EVs below are proposed for the site's receiving waters.

Table ES3 Shute Bay Environmental Values

Environmental Value	Rating	Description
Aquatic Ecosystems	High	The intrinsic value of aquatic ecosystems – for example, plants, animals and their ecological interactions.
Wildlife Habitat	High	Riparian wildlife and its habitat, food and drinking water – for example, key species such as turtles, platypus, seagrass and dugongs.
Human Consumers of Aquatic Foods	High	Health of humans consuming aquatic foods (such as fish, crustaceans and shellfish, other than oysters) from natural waterways.
Primary Recreation	High	Health of humans during recreation which involves direct contact and a high probability of water being swallowed – for example, swimming, surfing, windsurfing, diving and water-skiing.

Environmental Value	Rating	Description
Secondary Recreation	High	Health of humans during recreation which involves indirect contact and a low probability of water being swallowed – for example, wading, boating, rowing and fishing.
Visual Recreation	High	Amenity of waters for recreation which does not involve any contact with water – for example, walking and picnicking adjacent to a waterway.
Cultural Heritage	High	Indigenous and non-indigenous cultural heritage – for example: • custodial, spiritual, cultural and traditional heritage, hunting, gathering and ritual responsibilities; • symbols, landmarks and icons (such as waterways, turtles and frogs); and • lifestyles (such as agriculture and fishing).
Aquaculture	High	Health of aquaculture species and humans consuming aquatic foods (such as fish, molluscs and crustaceans) from commercial ventures.
Oystering	High	Health of humans consuming oysters from natural waterways and commercial ventures.
Seagrass	High	Maintenance and rehabilitation of seagrass habitat.

Prevailing south-easterly winds create waves that resuspend fine marine sediment within Shute Bay, particularly under low tide conditions in the upper harbour. It is also assumed that during a normal wet season the volume of water discharged into Shute Bay would contain elevated levels of total suspended solids and rocks of various sizes.

During construction, erosion and sediment control plans have been prepared and would be implemented to ensure mechanisms are installed to prevent impacts on environmental values in surrounding environmentally sensitive areas. The majority of excavation and reclamation will be undertaken “in the dry”. The marina revetment wall and the breakwater will be installed before dredging commences and as such the impacted waters will be wholly contained during dredging operations. Double silt curtains are proposed for the entrance, which is sheltered from prevailing winds, to contain any dredge plumes.

The operation of the SHMR will increase the potential for contaminated stormwater. The SHMR has integrated water sensitive urban design with stormwater managed on site using a variety of treatments prior to discharging to Shute Bay. Treatment train details are as follows.

- The stormwater runoff from the urban residential lots will pass through grassed swales with underlying bio-retention systems. Runoff will then flow through bio-retention basins before flowing offsite.
- All runoff from roofs will pass through rainwater tanks and into grassed swales with underlying bio-retention systems before passing through one of several bio-retention basins.
- Runoff from the car parking facility will be directed through an oil and grease separator and into a bio-retention swale and into one of several bio-retention basins.
- Road runoff will be directed through one of several bio-retention basins.

An extensive water quality monitoring program, in addition to treatment measures required of water-based recreational users, will aid in maintaining the existing high values of the

SHMR site. As part of this proposal, site specific water quality objectives have been determined.

Coastal Processes

The marine water quality in the vicinity of the site is dominated by coastal processes. Physical factors affecting marine water quality are tides, cyclones, wind and waves. Shute Harbour at the site is well flushed by tidal action due to the high tidal range. The upper harbour to the west of the proposed marina shallows, and hence, wave and tidal action reaches the bed and can resuspend sediment runoff from the local hillside catchments (largely national park), though run-off coinciding with low tidal water causing localised bed scour of the inter-tidal zone. A large range of combined water level, wind and wave conditions could influence morphological processes at the marina site and in Shute Bay.

By its nature and design the proposed completed marina will provide protection from severe to extreme wave climate, currents and coincident storm tide events. In the design and testing of the marina layout, several changes to the design of the isthmus on the western end of the marina were made to reduce siltation and scour impacts to acceptable levels. This involved the shortening and bending on the southern end of isthmus from the original straight proposal. It has been shown that the bathymetry is relatively stable post development and there is no significant erosion or deposition trend in Shute Bay which is consistent with the observed seabed bathymetry in recent times being relatively stable. Inside the marina basin, siltation rates and resulting volumes of maintenance dredge spoils are modest.

The proposed design takes account of extreme cyclonic event storm tide coincident wave conditions, including allowance for 300 mm possible future sea level rise and an increase in cyclone central pressure due to greenhouse effects.

The resultant marina, as proposed is very safe by industry standards, and will provide safe refuge for boats in events up to the ARI 200 year event.

The Proponent has committed to the following mitigation measures (other than coastal engineering and water sensitive design standards).

- Provide future residents protection from severe to extreme wave climate, currents and coincident storm tide events through the design of the SHMR development, as well as allowing for sea level rise.
- Provide emergency services and facilities by way of shelter for cyclones (car-park) and water based emergency service access (marina) to increase the safety standards for the community.
- Protect the water quality of Shute Harbour by providing appropriate sewage pump-out and refuelling facilities, polishing of current stormwater runoff from Proserpine-Shute Harbour Road and staging construction to ensure environmental harm is minimised during wet and dry excavation methods.
- Educate recreational boaters through an interpretative centre and education extension programs to assist in reducing potential detrimental impacts of recreational boaters on the reef by assisting locals, visitors and the recreational and commercial boating community to understand coastal processes and the marine environment and appropriate boating best practice.
- Operate the marina with regard to the Marina Industries Association of Australia ‘Clean Marinas’ accreditation programme.
- Use structures in the design of the SHMR that will encourage colonisation of marine fauna and fish passage through creating habitat complexity.

- Create a "Reef Conservation Fund" that will contribute to the ongoing sustainability of the coral reef including providing coral and low impact to seagrass moorings on the reef as well as education and awareness initiatives.

Air

The air quality within the Shute Harbour area has been assessed as unlikely to contain elevated levels of air quality pollutants (for example, NOx, SOx) or particulate matter due to the coastal sea breezes (high level of air mixing), the lack of industry, the small scale nature of the residential development in the locality and the low number of heavy vehicles that use Proserpine-Shute Harbour Road.

The construction of the SHMR infrastructure and buildings has the potential to cause elevated levels of dust nuisance if not appropriately managed. The construction phase of the SHMR will require the implementation of appropriate mitigation and management strategies to ensure that dust emissions from the construction works will not unduly impact surrounding sensitive receptors, and which have been identified within the Construction Environmental Management Plan.

The SHMR will release greenhouse gases both indirectly and directly as a result of activities such as fuel use by vehicles and electricity use during both the construction and operational phases. Mitigation measures include (to name a few):

- architectural design of the SHMR development such that energy requirements are minimised through natural ventilation, strategic position of windows and eves, light-weight construction materials;
- energy efficient fittings;
- no clearing of vegetation to the north of Proserpine-Shute Harbour Road such that vegetation will be available for natural carbon absorption processes when relinquished back to public ownership; and
- reuse and recycling of construction materials to reduce the demand on non-renewable resources.

In the event of an air quality complaint, an investigation will commence in the effort to resolve the complaint and ameliorate the excessive emission, if and where applicable.

Waste

The SHMR site is currently susceptible to waste contamination through litter and inappropriate sewage disposal/refuelling activities from moored vessels in the natural harbour.

The SHMR construction and operation will potentially negatively and positively impact on environmental values with the possibility of waste spills and loss of containment of waste resulting in impacts to soils, surface water, groundwater, terrestrial and marine fauna, and human health. A positive impact arises with the SHMR offering appropriate vessel management and waste disposal facilities to improve the existing situation.

A Waste Management Plan has been prepared to inform appropriate waste management strategies for both the construction and operation of the SHMR which will, as far as practicable, mitigate potential impacts on environmental values from waste contamination.

Noise and Vibration

The most significant existing noise and vibration source in the locality of the proposed SHMR is the Proserpine-Shute Harbour Road which is directly parallel and above the proposed site and Shute Harbour Transit Facility to the southeast.

Noise monitoring at the Shute Harbour Motel indicate traffic noise and wave action are the most likely significant sources of noise with relatively consistent noise levels across the week and short term peaks during the day. The noise levels at the closest noise sensitive place are also affected by traffic noise and wave action but are generally higher than those at the motel reflecting the location of the residence being closer to the Proserpine-Shute Harbour Road. The major source of vibration within the project site is traffic on Proserpine-Shute Harbour Road.

Potential noise and vibration sources during the construction of the marina phases will include: vehicle movements (including delivery trucks); sea wall construction using a vibratory hammer and conventional hammer; plant and equipment associated with both wet and dry excavation and building works.

Calm periods of pile handling and clutching will separate potentially noisy periods of pile driving. The piling time will be kept to a minimum. Inconvenience caused by the piling rig to Shutehaven is likely to be minimal, as it is distant from the proposed works and dominant winds would tend to push the sound away from the noise sensitive places.

Control measures will be implemented during the construction phase to minimise noise levels experienced at noise sensitive places surrounding the SHMR site with consideration to health effects of environmental noise and nuisance provisions.

While vibration from plant and equipment is expected during the construction phase of the SHMR, it is not expected to cause a significant impact due to the geological profile of the site and the limited number of and distance to sensitive places from the site.

Noise levels from the operation of the SHMR while having the potential to negatively impact adjacent noise sensitive places, will in character be consistent with the tourism-orientated development that exists in Shute Harbour.

In addition, as the development abuts a State-controlled Road, an assessment of the impact of road traffic noise on the sensitive places within the development was undertaken. The predicted noise levels when compared against relevant acoustic quality objectives specified in the Department of Main Roads Code of practice were excessive at proposed dwelling footprints located on lots directly backing onto Proserpine-Shute Harbour Road with other parts of the tourism precinct (including hotel) protected by building reflection and the 3 storey car park. Mitigation strategies include architectural treatment enforced through convents to achieve an appropriate level of internal amenity. No exceedence of the objective at formal open spaces (i.e. balconies) and recreational areas of the SHMR development has been identified.

In the event of a noise complaint being received, an investigation will commence to resolve the complaint and ameliorate the excessive emission, if and where applicable.

Nature Conservation

Terrestrial Flora

A detailed floral inventory of the site recorded a total of:

- 64 families of native Australian and exotic flora;
- 145 genera of native Australian flora and 22 genera of exotic flora (with 4 genera across both distinctions); and

- 172 species of native Australian flora and 24 exotic species of flora.

Approximately 60% of the terrestrial portion of the SHMR site is vegetated with remnant or near remnant low eucalypt woodland, and 30% with remnant mangrove shrub land to low closed forest. The remaining portion supports regrowth eucalypt woodland, degraded wasteland (i.e. former quarry), degraded roadside batters and power-line and road easements. Regional Ecosystems on the site carry a vegetation management status of *Not of Concern* and a biodiversity management status of *No Concern at Present.*

Approximately 2.59 hectares of woody (remnant and regrowth) vegetation would be affected, of which 1.8 hectares is 'remnant' vegetation, the majority of which comprises mangrove Regional Ecosystem (RE) 8.1.1 (1.65 hectares). The small area of RE8.12.5 (0.05 hectares) and RE8.12.14 (0.1 hectares) that is woodland/open forest, lies within the Proserpine-Shute Harbour Road reserve.

Most of the vegetation communities of the site, with the exception of terrestrial vegetation closest to Proserpine-Shute Harbour Road and a former quarry site are relatively undisturbed and have good ecological value and function.

Terrestrial Fauna

A fauna inventory of the site identified a total of 41 species of terrestrial fauna that can be confirmed or tentatively confirmed as being present based on remote observation or detection of non-specific signs comprising of:

- 7 species (3 families) of reptiles;
- 25 species (14 families) of birds; and
- 9 species (8 families) of mammals.

None of the species identified on the site:

- are threatened species subject to the provisions of State or Commonwealth legislation;
- are at the extent of their geographic range; or
- represent an extralimital extension to a previously known geographic range.

The attributes of the existing terrestrial vegetation were assessed and the impacts of the proposed development on fauna groups were determined to be minimal.

Aquatic Flora

A highly variable seagrass community covers much of the sediment within Shute Bay. Seagrass species included:

- *Halodule uninervis*;
- *Halodule ovalis*; and
- *Zostera Muelle*ri.

However, within and adjacent to the proposed SHMR site, predominantly bare substrate exists with patches of sparse to moderate seagrass. Approximately 14.59 hectares of spare to moderately dense seagrass was recorded in the 2007 survey within the proposed SHMR site. The biomass of such communities was low. Within the disturbance area external to the proposed SHMR site, a small amount of sparse to moderate *H. uninervis* communities occurs. Seagrass communities within the proposed SHMR site and immediately surrounding this area are indicative of a frequently disturbed environment (i.e. predominantly from wind and wave action). The distribution, density and community structure of seagrasses within the bay have varied significantly over the past two decades.

Mangrove communities within Shute Bay are dominated by the red mangrove (*Rhizophora stylosa*) with lower abundances of the grey mangrove (*Avicennia marina*), river mangrove (*Aegiceras corniculatum*), myrtle mangrove (*Osbornia octodonta*), blind-your-eye mangrove (*Excoecaria agallocha*), mangrove apple (*Sonneratia alba*) and yellow mangrove (*Ceriops tagal*). The mangroves on the western and southern sides of Shute Bay cover a significantly greater area than those within the east of the proposed SHMR site.

Within the proposed SHMR site approximately 1.84 hectares of mangroves currently occurs. Mangroves give way to patches of saltmarsh on mostly rocky ground which then rises in a relatively steep bank to Proserpine-Shute Harbour Road. Mangroves act as a natural filter for overland flow, protect the shoreline from erosion and contribute to the establishment of islands and the extension of shorelines.

Mixed macroalgae communities were found throughout much of subtidal sections of Shute Bay significantly overlapping seagrass distribution. Within the proposed SHMR site approximately 35 hectares of mixed (low cover) macroalgae communities were surveyed.

Coral communities form an extensive spit that partially encloses the bay's southern entrance. Coral cover on the spit is highest on the seaward side, where tidal flushing is greatest bringing food and clear water to the community. The relative abundance of each hard coral genus is typical of inshore coral communities in the Whitsunday region, with sediment tolerant genera such as Goniopora, Porites and Turbinaria dominating. Within the SHMR site approximately 10 coral colonies were recorded covering less than 2% of the substrate (approximately 0.44 hectares).

A loss of mangroves, seagrass and coral communities will occur as a result of the proposed SHMR. The loss of habitat is summarised below as:

- 14.59 hectares of sparse seagrass;
- 1.84 hectares of fringing mangrove forest;
- 34 hectares of macroalgae;
- 10 small coral colonies.

Aquatic Fauna

Fauna diversity with Shute Bay is supported by the above floral communities with unvegetated soft substrate, rocky substrates, mangroves and seagrasses playing a critical role in:

- shelter and refuge;
- food;
- stabilising bottom sediments;
- water quality; and
- substrate.

The macro-invertebrate infaunal communities of Shute Bay are characterised by a diverse and moderately abundant fauna, characteristic of intertidal communities in the Whitsunday region.

The coral, mangrove and seagrass communities of Shute Bay support a diverse assemblage of fishes.

It was determined that marine megafauna including whales, Dugong, dolphins, marine turtles and crocodiles all have a presence within the Whitsunday region. A risk assessment

was undertaken as to determine the likelihood of potential impact on marine megafauna. Potential impacts are able to be managed appropriately with a marine megafauna management plan proposed for implementation during construction and operation of the SHMR.

To offset the potential impacts the Proponent proposes (to name a few):

- to replace existing swing moorings with low impact to seagrass moorings, encouraging 950m^2 of seagrass colonisation;
- a "Reef Conservation Fund" funded initially by the Proponent and then via berth levies to fund the construction of public moorings to reduce anchor damage on the reef and public education and awareness campaigns through cultural and marine interpretive centres;
- construction of a marina to result in a mosaic of habitats associated with pontoons, piles and other intertidal and subtidal structures (and of course boats) which will provide substrate for many species of algae, hard and soft corals, sponges, ascidians and a variety of other invertebrate fauna;
- as water depth within the proposed marina is unlikely to support communities of seagrass and macroalgae, fish friendly structures are proposed to enhance fish habitat in the marina thereby raising the ecological value;
- compensatory habitat on the western edge of the isthmus will be replanted with mangroves although colonisation will occur naturally;
- greater opportunity for access to the coast via a public boardwalk and breakwater parkland; and
- extensive environmental monitoring program to measure performance indicators as they relate to ecological systems.

Cultural Heritage

No archaeological evidence for significant Aboriginal cultural heritage sites or materials has been found along the coastal fringe that is the SHMR site. However the Traditional Owners, the Gia and Ngaro people, have demonstrated that this area of coastline retains a high level of cultural significance to them.

These values include the following.

- Coastal values associated with coastal fishing and hunting grounds in pre-contact and post contact times.
- Flora and fauna of the development area and its value as bush tucker, including shellfish, food plants and medicines. Mangroves, reef habitat, seagrasses and dugongs were also viewed as important to traditional owners.

Consultation with Traditional Owners for the site (the Gia and Ngaro/Gia people) indicated that there were initially concerns regarding the impact of the development on the region's cultural heritage. These concerns primarily related to the potential impact of the proposed development on culturally significant flora and fauna, the potential to uncover archaeological findings and the involvement of cultural representatives in the construction phase of the development. Through a consultative process a Cultural Heritage Management Plan (CHMP) was developed that addresses these issues and demonstrates the high level of support for the project by the respondent parties.

The CHMP and the associated report that details the process by which it was achieved is a component of the EIS and has used the guiding principles and rationale of *COAG's Overcoming Indigenous Disadvantage – key indicators 2007* report to explore the

determinants of net social benefit, which are aligned to the proposed Shute Harbour Marina Development and the aspirations initiatives agreed to in the CHMP.

The Overcoming Indigenous Disadvantage – key indicators 2007 report, provides a robust 'roadmap' for actioning change to address disadvantage and contribute to 'closing the social, economic, environmental and wellbeing gap' between Indigenous and non-Indigenous Australians.

While the SHMR does not address all indicators of disadvantage for Gia and Ngaro/Gia communities, it is closely aligned to three of the four headline indicators. This alignment is demonstrated through the potential positive impact on Gia and Ngaro peoples through the opportunity to:

- participate in and share economic prosperity and cultural tourism opportunities,
- support the intrinsic benefits of governance and culture in community capacity building,
- maintain generational celebration and learning of cultural heritage traditions, language and expression,
- contribute to functional and resilient families and communities, and
- provide generational "care for country", while showcasing Indigenous pride and knowledge to local, regional and international tourists.

It is therefore concluded that the CHMP will contribute to positive long term outcomes for at least two Indigenous peoples – the Gia and Ngaro communities at a local community level.

The CHMP has been signed by the Gia and Ngaro/Gia people and the Proponent. The CHMP has been approved and registered by the Department of Natural Resources and Water in April 2008.

Socio-economic

The socio-economic values associated with the SHMR development are listed below.

- The population in the Whitsunday Local Government Area (LGA) has grown rapidly in the past five years, above that of the Mackay Statistical Division (Mackay SD) and Queensland.
- The Whitsunday LGA has a higher average age when compared to the Mackay SD and the State, although the average age for the Whitsunday LGA has declined over the last five years. This is likely a result of young adults migrating to the region in search of job opportunities and coastal lifestyle, while older persons may be migrating to other regions to avoid the increasing cost of living.
- The Whitsunday LGA is a culturally diverse area, recording a high percentage of overseas born persons when compared to the Mackay North Coast, Mackay SD and Queensland. However, the Whitsunday LGA records a lower proportion of persons of Indigenous heritage.
- The Whitsunday LGA regional economy has been growing strongly over the past five years, in line with the State.
- The Whitsunday LGA economy is highly reliant on the accommodation, cafés and restaurants sector and the transport and storage sector, largely attributable to the Whitsunday's position as a key leisure tourism destination and significant air and sea transport infrastructure in the region.
- In line with the Mackay and State experiences, Whitsunday LGA is currently experiencing a tight labour market, with historically low levels of unemployment.

- Whitsunday LGA has a relatively high proportion of persons employed in the occupations of managers, labourers and community and personal service workers, and a relatively lower proportion of persons employed in the occupations of clerical and administrative workers and professionals.
- Whitsunday LGA has experienced a strong level of dwelling investment in the past three years, with the number and value of dwelling approvals growing at a faster rate than the Mackay SD and Queensland.
- Over the past year, Whitsunday LGA has experienced strong growth in the number and value of sales for house and unit properties, particularly in the suburbs of Cannonvale, Airlie Beach and Jubilee Pocket.
- The immediate area and surrounding service centre of the SHMR has considerable social, community and recreational infrastructure capable of servicing the majority of the local population's needs, while regional level services are primarily provided in Proserpine and Mackay.

A number of mitigation strategies are proposed to maintain the socio-economic values. Mitigation strategies include the following commitments.

- Source labour from the local labour pool.
- Integrate the values of the existing community and their lifestyle in the proposed development.
- Enhance recreational, leisure and employment options in the longer term.
- Reduce impacts on access to health services from additional population.
- Reduce impacts on provision and access to sporting facilities from additional population.
- Facilitate local community access to recreational facilities provided by the SHMR.
- Reduce potential impacts on short stay accommodation availability, rental prices and the accessibility to traditional low-cost housing options.
- Ensure equitable access within the marina and associated facilities for all persons.
- Retain as much construction expenditure as possible in the regional economy.
- Retain as much visitor expenditure as possible in the regional economy.
- Facilitate benefits to and opportunities for local business.
- Reduce potential impacts on short stay accommodation availability for tourists.

Conclusions

The proposed SHMR will be a sustainable development providing a world class tourism destination and marine facility of consistent quality to the experience offered by the natural and resort environments available in the Whitsunday Islands, aligning itself with Commonwealth, State and regional planning initiatives and priorities by achieving net environmental, social and economic benefits.

The EIS has been based on technical reports which have thoroughly assessed the potential environmental, social and economic impacts of every aspect of the proposed SHMR. The findings of the technical reports have informed the design of the SHMR and have driven the final form of the Master Plan and the formation of the environmental management plans.

Where potential adverse impacts have been identified, appropriate mitigation measures have been proposed to manage and control the impacts. Mitigation measures that have been proposed within the EIS take the form of physical infrastructure works, education and

awareness, financial contributions and ongoing environmental management strategies as outlined in the aforementioned commitments.

It is concluded that the SHMR development is suitable for approval subject to reasonable and relevant conditions.

You are invited to read in full about the opportunity that is the SHMR and offer feedback to the Proponent.