



**Queensland Government**  

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**State Development**

**COORDINATOR-GENERAL'S REPORT**

*on the*

**SUPPLEMENTARY ENVIRONMENTAL  
IMPACT STATEMENT**

*for the*

**PORT OF AIRLIE MARINA DEVELOPMENT  
PROJECT**

**December 2003**

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## 1 INTRODUCTION

This report provides an evaluation of the Supplementary Environmental Impact Statement (SEIS) process for the Port of Airlie Marina Development project (POA). The SEIS was conducted by Windward AB Pty Ltd (WAB) and the Whitsunday Sailing Club (WS Club). This Report has been prepared pursuant to Section 35 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act).

A Supplementary Advice Statement was lodged with DSD on 6 November 2000 and the Coordinator-General declared the POA project a “significant project”, for which an EIS is required pursuant to the then Section 29b (now Section 26) of the SDPWO Act on 1 December 2000. On 22 June 2001, the Commonwealth Minister for the Environment and Heritage determined that the POA project constituted a “controlled action” pursuant to Section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The controlling provisions are ‘world heritage’, ‘listed threatened species and communities’ and ‘listed migratory species’.

The Supplementary Advice Statement and draft Terms of Reference (ToR) for the SEIS were issued to relevant Advisory Agencies for review on 25 January 2002. The review period closed on 15 February 2002. Following lengthy discussions, particularly concerning Acid Sulfate Soil, the ToR was issued by DSD on 1 October 2002.

The objective of this report is to summarise key issues associated with potential impacts of the POA project on the physical, social and economic environments at the local, regional, state and national levels. It is not intended to record all the matters which were identified and subsequently resolved. Instead, it focuses mainly on those issues which require conditioning for the project to proceed and then determines relevant conditions.

The Proponent will be bound by the conditions listed in this report when it is preparing for, or conducting, reclamation and construction-related activities associated with the POA project.

This report also constitutes a Concurrence Agency’s response, in accordance with the Integrated Development Assessment System (IDAS) of the *Integrated Planning Act 1997* (IPA), and must be considered by the Assessment Manager (Environmental Protection Agency or Whitsunday Shire Council, depending on the stage of development) when an application for a development permit is lodged by the Proponent. The Assessment Manager must attach the conditions in this report to any Development Approval authorised herein, which it issues for the POA project, pursuant to Section 3.5.11(1) of IPA.

The impacts and conditions stated in this Report focus on the following construction activities:

- ◇ creation of land suitable for the uses identified in the SEIS and Addendum;
- ◇ construction of the marina basin;
- ◇ dredging of the access channel;
- ◇ construction of building platforms and foundations;
- ◇ installation of site services (power, water, wastewater, roads, promenades, etc.); and
- ◇ construction of the marina.

Construction of buildings on the land created will ultimately be subject to the provisions of the Whitsunday Shire Council Planning Scheme. These buildings will be code assessable under the Planning Scheme with codes to be established in an agreement between the Proponent and Whitsunday Shire Council.

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The following terminology is used in this Report:

Conditions – provisions that the Coordinator-General has imposed pursuant to Section 39 of the SDPWO Act, which stated must be attached to any development approval(s) given for the project under the IPA,

Requirements – provisions that the Coordinator-General requires of the Proponent before undertaking specific project activities. The requirements are based on evaluation of the SEIS and associated documentation and best practice.

Commitments – are statements of commitment to certain courses of action made by the proponent and listed in the SEIS, Addendum to the SEIS and other documentation provided by the Proponent.

## **2 PROJECT DETAILS**

### **2.1 THE PROPONENT**

The joint project Proponents (referred to subsequently as the Proponent) are Windward AB Pty Ltd (WAB) (ACN: 101 370 772) and the Whitsunday Sailing Club (WS Club) (ACN: 010 706 626).

WAB is a joint venture company formed to undertake the development including obtaining all necessary environmental and development approvals.

WS Club obtained a Permit to Occupy the site in 1996 and has been progressing with development approval arrangements since that time. Sinclair Knight Merz Pty Ltd was commissioned by the Proponent to prepare the Supplementary EIS.

### **2.2 PROJECT DESCRIPTION**

The Proponent intends to construct a marina complex that integrates boating and tourism operations with a mix of residential and commercial facilities. The project will complement and augment existing development and activities in Airlie Beach and the Whitsunday region.

The main components of the proposed development are:

- ◇ approximately 240 marina berths for vessels up to 30m in length;
- ◇ passenger ferry terminal for inter-island ferries and tourist charters;
- ◇ 3 lane public boat ramp with parking for 70 car-trailer units;
- ◇ public and private carparks for approximately 920 cars/car-trailer units;
- ◇ a pedestrian mall/village square linking the harbour and other facilities to the existing commercial and tourist area of Airlie Beach;
- ◇ public open space including landscaped parklands, a beach and harbour promenades around the marina foreshore;
- ◇ approximately 4,400m<sup>2</sup> of marina retail and commercial space;
- ◇ approximately 140 resort apartments;
- ◇ approximately 365 residential units/apartments;
- ◇ 7 detached residences;
- ◇ a maritime training academy; and
- ◇ an area of approximately 8,845m<sup>2</sup> for treatment of dredge spoil.

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The proposed marina will incorporate a range of public access facilities to enhance public open space available to local residents and visitors. These will include:

- ◇ a three-lane public boat ramp;
- ◇ an open village square in the centre of the commercial precinct;
- ◇ a boardwalk surrounding the harbour's edge and connecting a range of precincts;
- ◇ parklands, totalling 6,300m<sup>2</sup>, including a park and lookout at the end of the breakwater;
- ◇ a new public beach along the seaward edge of the breakwater; and
- ◇ land for a possible maritime training academy or similar public purpose use.

The SEIS Addendum states that POA will entail an investment of about \$125 million and is estimated to create up to 195 jobs during construction and 300 jobs during operation. The main features of the proposal, as described by the Proponent in Section 2 of the SEIS and updated in the Addendum are set out below.

### **2.2.1 Marina**

The marina basin will have an area of approximately 12ha with a minimum water depth of 3.5m at Lowest Astronomical Tide. The marina will accommodate:

- ◇ approximately 240 private and commercial berths of size from 10-30m, including:
  - ◇ up to 20 berths to be owned by the WS Club; and
  - ◇ 12 large berths for visiting super yachts, located adjacent to the Village Square.
- ◇ 6 commercial wharves adjacent to the ferry terminal.

### **2.2.2 Marina Facilities Area**

- ◇ 4 floating wharves for servicing inter-island passenger ferries and charter yachts;
- ◇ 80 tonne ship lift;
- ◇ 20m wide slipway;
- ◇ hardstand area for boat repairs;
- ◇ sewage pump-out and refuelling berth;
- ◇ workshops and storage facilities for maintenance equipment; and
- ◇ storage for petrol and diesel fuel.

### **2.2.3 Passenger Ferry Terminal**

- ◇ 2 storeys with a gross floor area of approximately 900m<sup>2</sup>;
- ◇ underground parking area with spaces for 64 cars; and
- ◇ capacity to process an average of 2,400 passengers per day at final development.

### **2.2.4 Marine Training Academy**

- ◇ area of 2,071m<sup>2</sup> has been allocated in the Master Plan; and
- ◇ the academy could offer a range of professional and recreational boating courses.

### **2.2.5 Public Boat Ramp**

- ◇ three lanes and central queuing pontoon;
- ◇ a ramp operational at all states of the tide;
- ◇ car/trailer parking for 70 units;
- ◇ designed and constructed to Queensland Transport requirements; and
- ◇ managed by the Whitsunday Shire Council.

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### **2.2.6 Public Transport Interchange**

- ◇ parking for 5 large coaches and approximately 110 cars plus taxi and minibus stands.

### **2.2.7 Public Open Space**

- ◇ village square (approximately 4,450 m<sup>2</sup>);
- ◇ landscaped parklands (approximately 6,300m<sup>2</sup>);
- ◇ public beach (approximately 250m x 75m); and
- ◇ harbour promenades and boardwalks.

### **2.2.8 Marina Retail and Commercial**

Activities which could be provided include:

- ◇ specialty restaurants;
- ◇ boutique retail facilities;
- ◇ tourist and boating related retail facilities;
- ◇ tour and travel operators; and
- ◇ medical and other professional services.

### **2.2.9 Marina Apartment Hotel**

- ◇ approximately 140 unit resort apartment hotel;
- ◇ maximum height 5 storeys;
- ◇ 3 to 4 star standard; and
- ◇ entertainment and conference facilities.

### **2.2.10 Residential and Tourism**

- ◇ approximately 365 units/apartments; and
- ◇ 7 residential blocks.

## **2.3 SITE LOCATION**

The project site is in Boathaven Bay (also known as Muddy Bay), at the eastern end of the tourist, commercial and retail precinct of Airlie Beach. The site (approximately 30ha) lies within a 130ha Permit to Occupy (No. 206577) over the seabed below the high water mark, issued by the then Department of Lands on 4 January 1996.

## **2.4 RATIONALE FOR THE POA PROPOSAL**

The Whitsunday Region Marina Demand Analysis (2001) commissioned by the Whitsunday Coastal Developments Inter-departmental Committee, comprising representatives of DSD, EPA, Queensland Tourism and Departments of Transport, Natural Resources and Mines, and Local Government and Planning, identified potential for growth in the medium and long-term demand for marina berths in the Whitsunday Area (Bowen to Mackay).

The POA development is intended to meet some of the future demand for marina berths, boat repair and maintenance facilities, passenger management facilities and land for residential and commercial development in the Whitsunday region. POA is expected to produce a number of advantages for the region including:

- ◇ significant stimulation of economic activity and job growth;

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- ◇ a range of tourist and residential accommodation to meet demands for tourism and investment opportunities as well as provide exclusive waterfront development;
  - ◇ high quality commercial and public open space that would improve the standard of development in Airlie Beach and provide a new focus for these activities;
  - ◇ additional passenger facilities for boat and long distance bus passengers; and
  - ◇ a controlled environment for boat repairs and facilities for vessel sewage pump out.

The POA site is identified in Whitsunday Shire Council's Strategic Plan as a "Mainland Urban Tourist Facility". However, it should be noted that the majority of the site will only be included within the Local Authority boundary once reclamation occurs. The proposal has been developed to align with Council's Strategic Plan and Planning Scheme as well as the Whitsunday Hinterland and Mackay Regional Plan, Whitsunday Tourism Strategy, Vision Airlie Strategy and the Draft Whitsunday Retail Strategy. The environmental management controls documented in the SEIS are intended to ensure that the proposal complies with each of these plans and strategies.



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### **3 THE IMPACT ASSESSMENT PROCESS**

#### **3.1 LODGEMENT OF THE SUPPLEMENTARY ADVICE STATEMENT**

On 4 January 1996 the WS Club was granted a Permit to Occupy over 130ha of Boathaven Bay at Airlie Beach in order to investigate the development of a marina and associated commercial and residential facilities. The Conditions of the Permit to Occupy required that a full Impact Assessment Study (IAS) be carried out to the satisfaction of the then Department of Environment and Heritage (DEH).

A draft IAS for the proposed POA project was prepared for WS Club by Burchill Partners Pty Ltd and released for comment in December 1998. That IAS was coordinated by DEH's successor, the Environmental Protection Agency (EPA). A Preliminary Environmental Assessment Review was undertaken by EPA and a report submitted to the WS Club in March 1999. The review was critical of the draft IAS and the impacts that would occur to the receiving environment. No further action was taken by WS Club until November 1999 when the State Government and WS Club invited Transtate Limited (TL) to participate in the project. TL and Meridien Pty Ltd are major shareholders in Windward AB Pty Ltd (WAB), one of the joint Proponents for the project.

The WS Club and WAB partnership has produced a revised marina proposal which recognises the critical technical, financial and environmental comment made on the draft IAS (1998) by stakeholders. The revised proposal considerably reduces the area which needs to be reclaimed. Consequently, large-scale extractive industry is not required to provide fill for the development. The proposed quarry and transportation of fill material were major issues of contention for stakeholders in commenting on the draft IAS.

The Proponent lodged a Supplementary Advice Statement for the POA project with DSD on 6 November 2000 and the Coordinator-General declared the project a "significant project", for which an EIS is required, pursuant to the then Section 29b (now Section 26) of the SDPWO Act, on 1 December 2000. Similarly, on 22 June 2001, the Commonwealth Minister for the Environment and Heritage determined that the POA project constituted a controlled action pursuant to Section 75 of the EPBC Act.

The Part 3, Division 1, controlling provisions are:

- ◇ Sections 12 and 15A (World Heritage);
- ◇ Sections 18 and 18A (Listed threatened species and communities); and
- ◇ Sections 20 and 20A (Listed migratory species).

On 7 December 2001, the Commonwealth Government accredited the Queensland EIS process, thereby allowing the Proponent to conduct a single impact assessment process acceptable under both jurisdictions for evaluation of potential project impacts and determination of remedial measures.

#### **3.2 REVIEW AND REFINEMENT OF THE SUPPLEMENTARY EIS TERMS OF REFERENCE**

Copies of the Supplementary Advice Statement and the draft Terms of Reference were distributed to the following Agencies for comment:

##### *State Government*

- ◇ Department of Aboriginal and Torres Strait Islander Policy
- ◇ Department of Emergency Services
- ◇ Department of Employment and Training
- ◇ Department of Families
- ◇ Department of Housing

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- ◇ Department of Local Government and Planning
  - ◇ Department of Main Roads
  - ◇ Department of Natural Resources and Mines
  - ◇ Department of the Premier and Cabinet
  - ◇ Department of Primary Industries
  - ◇ Department of Tourism, Racing and Fair Trading
  - ◇ Environmental Protection Agency
  - ◇ Queensland Transport

#### *Local Government*

- ◇ Whitsunday Shire Council

#### *Commonwealth Government*

- ◇ Department of the Environment and Heritage (formerly Environment Australia)
- ◇ Great Barrier Reef Marine Park Authority

Comments on the draft Terms of Reference were accepted until the close of business on Friday 15 February 2002. The Terms of Reference was issued to the Proponent on 1 October 2002.

### **3.3 REVIEW OF THE SUPPLEMENTARY EIS**

The SEIS was prepared for the Proponent by Sinclair Knight Merz Pty Ltd and distributed to Advisory Agencies on Wednesday 20 November 2002. Advertisements calling for public comment were placed in the following newspapers:

- ◇ Weekend Australian - 16 November 2002
- ◇ Courier Mail - 16 November 2002
- ◇ Proserpine Guardian - 20 November 2002
- ◇ Whitsunday Times - 21 November 2002

The SEIS could be inspected via the Department of State Development (DSD) web-site. A printed copy could be purchased for \$60 and a CD-ROM version was available for \$15.

The SEIS was displayed at the following locations during the public review period (Thursday 21 November 2002 to Friday 20 December 2002):

- ◇ Whitsunday Shire Library, Proserpine
- ◇ Cannonvale Library
- ◇ State Development Centre, Mackay
- ◇ Whitsunday Sailing Club, Airlie Beach; and
- ◇ State Library of Queensland, Brisbane.

Submissions were to be forwarded to DSD by Monday 23 December 2002. However, due to the Christmas period and DSD's office closure, late submissions were accepted.

Following the public review of the SEIS, a total of 53 "properly made" submissions were received by the Coordinator-General consisting of 15 from Advisory Agencies, 36 from members of the public and 2 from community interest groups. Two petitions, one containing the signatures of 27 supportive petitioners and the other listing 348 signatures opposed to the proposal, were also received.

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Replies were received from:

### **Advisory Agencies**

- ◇ Department of Aboriginal and Torres Strait Islander Policy
- ◇ Department of Emergency Services
- ◇ Department of Employment and Training
- ◇ Department of Families, Youth and Community Affairs
- ◇ Department of Housing
- ◇ Department of Local Government and Planning
- ◇ Department of Main Roads
- ◇ Department of Natural Resources and Mines
- ◇ Department of the Premier and Cabinet
- ◇ Department of Primary Industries
- ◇ Department of Tourism, Racing and Fair Trading
- ◇ Environmental Protection Agency
- ◇ Great Barrier Reef Marine Park Authority
- ◇ Queensland Transport; and
- ◇ Whitsunday Shire Council.

### **Public – Individuals, Community Interest Groups and Petitions**

#### **Individuals**

Angledal S	George R	Pascoe-Webbe T
Ballard P	Gubb L	Petit T
Beauchamp R	Halter S & P	Robieson K
Borer R & K	Hart A	Sheils J
Brown J	Howells D	Smith C
Bryson A	Jiggins	Storey P
Buick R & D	Keighery J	ten Haken E
Choi J	McMahon D	Thomas J
Collins B	Meeder A	Trott K
Cox J	Morgan B	Upton P & C
Cox P	Murchic L	Walker B
Fletcher J	O'Neill T	Wort J

19 submissions supporting the project  
3 submissions in favour of project if suggested changes are made  
12 submissions opposed to the project  
2 submissions with unclear intent

#### **Community Interest Groups**

Whitsunday Sailing Club - supporting the project (note that the Sailing Club is one of the joint proponents for the project and has a vested interest in it proceeding)  
Wildlife Whitsunday - opposed to the project

#### **Petitions**

Two petitions were received by the Coordinator-General, one containing 27 signatures in support of the project and another listing 348 signatures opposed to the proposal.

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### **3.4 REVIEW OF THE ADDENDUM TO THE SUPPLEMENTARY EIS SUBMISSIONS**

All submissions on the SEIS were forwarded to the Proponent for its consideration. In some cases, where respondents raised issues, the Proponent contacted the respondent directly to resolve the matter. Otherwise, the Proponent prepared a clarification or additional information for inclusion in the Addendum to the SEIS which was lodged with DSD on Thursday 24 April 2003.

On Tuesday 29 April 2003 copies of the Addendum were issued to all Advisory Agencies for their consideration and comment by Friday 23 May 2003. Copies of relevant sections of the Addendum were also forwarded to public submitters who had raised specific issues with the project. The proponent also issued a press release which highlighted the release of the Addendum and its availability for viewing on the Internet. An article reflecting the press release was published in the *Whitsunday Times* on 15 May 2003 and the *Proserpine Guardian* on 21 May 2003.

Comment from the Advisory Agencies and other interested parties was considered by the Coordinator-General in the preparation of this Report.

A number of issues including extent of seagrass within Boathaven and Pioneer Bays and construction noise level requirements remained unresolved for some time. Following a series of meetings the Proponent has now provided additional documentation to satisfy Advisory Agency concerns.

### **3.5 COORDINATOR-GENERAL'S REPORT**

This report represents the end of the State impact assessment process. Essentially it is a review of that process and an analysis of the outcomes of that process, and proposes conditions under which the project may proceed.

### **3.6 COMMONWEALTH IMPACT ASSESSMENT**

The Commonwealth Minister for the Environment and Heritage determined, on 22 June 2001, that the Project constituted a "controlled action" pursuant to Section 75 of the EPBC Act.

On 7 December 2001, the Commonwealth Department of the Environment and Heritage (CDEH) (formerly Environment Australia) accredited the assessment component of the Queensland EIS process for POA indicating that it was acceptable to the Commonwealth, and thereby allowing the Proponent to undertake one impact assessment process, satisfying both State and Commonwealth requirements.

However, it should be noted that the Commonwealth Minister for the Environment and Heritage will undertake a separate approval process. Following the release of the Coordinator-General's Report, officers of the CDEH will prepare a report for the Minister. The Minister will then grant, or withhold, approval for the controlled action under Section 133 of the EPBC Act. The Minister may attach conditions to the approval, in addition to those set by the Coordinator-General, to mitigate impacts on matters of 'national environmental significance'.

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## 4 EVALUATION OF ENVIRONMENTAL EFFECTS

### 4.1 DEFINITION OF 'ENVIRONMENT'

The SDPWO Act defines 'environment' to include:

- (a) ecosystems and their constituent parts, including people and communities;
- (b) all natural and physical resources;
- (c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
- (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

'Environmental effects' means "the effects of development on the environment, whether beneficial or detrimental". These effects can be direct or indirect, of short, medium or long-term duration and cause local or regional impacts.

This chapter describes the major environmental effects identified during the SEIS process, including in the SEIS and Addendum documents, in submissions to the EIS and in consultation with Advisory Agencies and other key stakeholders. Comments have been provided on these matters and, where necessary, conditions to mitigate the impacts are given.

### 4.2 PUBLIC SUBMISSION ISSUES

Issues raised in public submissions opposing the project include:

- ◇ potential destruction of valuable ecosystems (e.g. seagrass and mangroves) and its effect on dugong, turtles, birds etc.
- ◇ expected reduced demand for a new marina following expansion of Abel Point Marina
- ◇ increase in traffic (road and water) congestion
- ◇ loss of visual amenity
- ◇ perceived excessive building heights
- ◇ noise and air pollution from construction and marina operations
- ◇ eviction of boat owners from moorings at the site
- ◇ redundancy of ferry terminal facilities Shute Harbour
- ◇ lack of sufficient community consultation.

Issues stated in public submissions in favour of the project include:

- ◇ major asset to the local community, the Whitsunday region and Queensland
- ◇ contribution to the vibrant atmosphere of Airlie Beach
- ◇ region in urgent need of extended marina facilities, particularly an all-weather marina for refuge during cyclones and storms
- ◇ need for additional facilities such as sullage pumpout, competitively-priced fuel, water, repair facilities and greater yacht security
- ◇ current use of Boathaven Bay reflects poorly on the community and does not enhance the environment
- ◇ economic and employment benefits for Airlie Beach and the region
- ◇ enhance community aesthetics
- ◇ ferry terminal; major benefit for tourism growth and relief of Shute Harbour congestion
- ◇ marina will provide healthy competition to help lower prices and encourage visitors
- ◇ bus terminal needed in the area

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Issues outlined in the petition opposing the project are:

- ◇ the destruction of valuable and endangered natural assets; including effect on :
  - seagrass
  - dugong
  - mangroves
  - wader birds
  - rufus owls
- ◇ the unnecessary and expensive duplication of services
- ◇ the increase in traffic congestion
- ◇ the loss of visual amenity
- ◇ noise and air pollution
- ◇ loss of opportunity for recreation and tourist infrastructure.

Issues stated in the petition in favour of the project are:

- ◇ well planned and designed and compatible with, and complementary to, the township of Airlie Beach
- ◇ significantly enhanced commercial, recreational, educational, residential and employment opportunities in Airlie Beach and the Whitsunday region
- ◇ responds to demand for marina berths in the area
- ◇ responds to demand for new commercial development opportunities
- ◇ will not detract significantly from the natural environment values of Airlie Beach and the Whitsunday region
- ◇ includes a number of features such as sewage pump out, controlled areas for boat maintenance and repairs and stormwater management that will reduce current impacts on water quality in Boathaven Bay and Pioneer Bay
- ◇ provides impetus and funding to allow upgrading of existing wastewater treatment plants at Jubilee Pocket and Cannonvale.

The views expressed above have been considered in identifying and addressing project impacts and in reaching the conclusion outlined in Chapter 7 of this report.

### **4.3 AGENCIES WHOSE CONCERNS WERE SATISFIED**

The Departments of Employment and Training; Emergency Services; Families; Tourism, Racing and Fair Trading; and the Premier and Cabinet were participating Advisory Agencies whose concerns were addressed during the SEIS process. These agencies confirmed their satisfaction with the information supplied after being issued with the Addendum Report on the SEIS.

### **4.4 AGENCIES WITH FURTHER CONCERNS**

The remaining Advisory Agencies sought additional information or commitments to those provided in the SEIS and Addendum. The following commentary on impacts summarises the stance of the respondent(s) and the Proponent respectively. Each section addressing a key issue concludes with a set of conditions which will allow the POA project to proceed whilst subject to measures which negate or minimise expected impacts directly, or indirectly, attributable to the project.

In attempting to satisfy the requirements and concerns of agencies, the Proponent conducted numerous discussions with a variety of respondents after the release of the Supplementary and Addendum documents. In most cases, issues were clarified between the Proponent and the relevant respondent.

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“Appendix 1 – Conditions and Requirements” contains a compilation of all the proposed conditions and requirements which appear at the conclusion of the discussion of each key issue in this section and in the next section, “5 Sustainable Development Measures”. Appendix 1 also contains those conditions that would normally be applied by EPA under the *Integrated Planning Act 1997* for Environmentally Relevant Activities listed in Schedule 1 of the Environmental Protection Regulation 1998. The EPA would be the administering authority for these conditions.

#### 4.5 Evidence or Other Material Relied Upon

Evidence or other material relied upon in considering the issues and determining conditions in sections 4.6 - 4.23.4 below includes:

- (1) Sinclair Knight Merz, November 2002, *Port of Airlie Supplementary Environmental Impact Statement*, on behalf of Windward AB Pty Ltd and Whitsunday Sailing Club;
- (2) Sinclair Knight Merz, April 2003, *Port of Airlie Addendum to the Supplementary Environmental Impact Statement* on behalf of Windward AB Pty Ltd and Whitsunday Sailing Club;
- (3) Relevant submissions and comments received from persons and Advisory Agencies listed in Section 3.3 and Appendix 2 of this Report;
- (4) Correspondence and notes from meetings with various Advisory Agencies and/or the Proponent;
- (5) Section 39 of *State Development and Public Works Organisation Act 1971 (Qld)*;
- (6) Chapter 3, Schedule 8, Part 1 of *Integrated Planning Act 1997(Qld)*;
- (7) *Environmental Protection Act 1994 (Qld)*;
- (8) Environmental Protection Agency, 1997, *Environmental Protection Policy (Water)*
- (9) Environmentally Relevant Activities administered by EPA
- (10) Environmental Protection Agency, 2001, *State Coastal Management Plan - Queensland's Coastal Policy*
- (11) *Fisheries Act 1994 (Qld)*;
- (12) Department of Primary Industries, *Fish Habitat Management Operational Policy (FHMOP)* documents;
- (13) *Land Act 1994 (Qld)*;
- (14) *Nature Conservation (Wildlife) Regulation 1994 (Qld)*;
- (15) *Transport Infrastructure Act 1994 (Qld)*;
- (16) *Transport Operations (Marine Safety) Act 1994 (QLD)*;
- (17) *Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)*;
- (18) *Environmental Protection and Biodiversity Conservation Regulation 2000 (Cwlth)*;
- (19) Marsh, H. 2003, *An Evaluation of the Likely Impacts of the Proposed Port of Airlie Marina on the Dugong and its Seagrass Food – Answers to Questions posed by the EPA staff*, Consultancy Report for the Queensland Environmental Protection Agency, James Cook University, Queensland;
- (20) FRC Environmental. 2003, *Distribution of Seagrass within Boathaven Bay – August 2003*, Consultancy Report for Windward AB Pty Ltd;
- (21) Institute of Public Works Engineering, Australia, Queensland Division, September 1992, *Queensland Urban Drainage Manual*;
- (22) Ahern, et al., 1998, *Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland*;
- (23) McDonald, et al., 1990, *Australian Soil and Land Survey Field Handbook*;
- (24) Isbell, 1996, *Australian Soil Classification*;
- (25) Department of main Roads, *Guidelines for Assessment of Road Impacts of Development Proposals (2001)*;
- (26) Department of Main Roads, *Manual of Uniform Traffic Control Devices*;
- (27) “Response to Whitsunday Shire Council from Windward AB Pty Ltd to enable Whitsunday Shire Council to complete its submission on the Supplementary

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- Environmental Impact Statement for the Port of Airlie Marina Development Project, Airlie Beach, Whitsundays”, dated April 2003;
- (28) Mitton Consulting, December 2002, *Car Parking Study 2002* (Addendum to Chapter 13 of Supplementary Environmental Impact Statement);
  - (29) Correspondence to Department of Local Government and Planning (Mackay) from WS Group on behalf of Windward AB Pty Ltd dated 20 May 2003;
  - (30) Correspondence titled “Port of Airlie Development – Noise Construction Management” to Sinclair Knight Merz from Richard Heggie Associates Pty Ltd dated 7 September 2003;
  - (31) Brown & Root Services Asia Pacific, 2001, *Whitsunday Region Marina Demand Analysis – 2001*, prepared for Whitsunday Region Interdepartmental Committee;
  - (32) Whitsunday Shire Council Strategic Plan and Planning Scheme;
  - (33) Draft Whitsunday Hinterland and Mackay Regional Plan (WHAM 2015);
  - (34) Whitsunday Tourism Strategy (1997);
  - (35) Vision Airlie Strategy (1998);
  - (36) Whitsunday Shire Council, June 2000, *Draft Whitsunday Retail Development Strategy*;
  - (37) Queensland Government, December 1999, *Local Industry Policy – A Fair Go For Local Industry*, Guidelines for developing Local Industry Participation Plans.
  - (38) Department of Natural Resources and Mines, June 2000, *Memorandum of Understanding for the Provision of Consistent Advice on Coastal Development Involving Acid Sulfate Soils Between Department of Natural Resources and Mines, Department of Primary Industries and Environmental Protection Agency*.

#### **4.6 PRINCIPAL ISSUES**

The principal issues identified during the SEIS process were:

- ◇ marine flora and fauna
- ◇ dredge spoil management
- ◇ stormwater management and water quality management
- ◇ acid sulfate soil management
- ◇ hydrodynamic modelling
- ◇ management of artificial beach
- ◇ construction noise
- ◇ road access
- ◇ public boat ramp
- ◇ public transport interchange
- ◇ application of the Local Industry Policy
- ◇ Whitsunday Shire Council issues
- ◇ worker housing
- ◇ temporary and permanent residential accommodation
- ◇ commercial and retail activity
- ◇ cultural heritage.

#### **4.7 MARINE FLORA AND FAUNA**

##### **4.7.1 Marine Floral Communities**

###### Findings on Material Questions of Fact:

- It is generally acknowledged that there is considerable variation in the distribution and density of seagrasses (year by year and season by season) in Boathaven Bay. The seagrass distribution and density reported in the SEIS is likely to be near its greatest extent in this location as conditions for seagrass were optimal at the time of the



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survey. This is supported by the results of the seagrass surveys of Boathaven Bay and Pioneer Bay which have been undertaken by DPI and FRC Environmental in the last 16 years. It is also recognised that there are limitations in comparing the results of different surveys which utilised different survey techniques and sampling methodology, as is the case in this situation.

- The following observations have been made in relation to the various seagrass surveys undertaken by DPI and FRC Environmental since 1987:
  - ◊ DPI surveys indicate that there has been a 40 per cent increase in seagrass meadows between 1987 and 1999 in the Whitsunday region.
  - ◊ DPI surveys indicate an apparent significant decline in seagrass meadow area in Pioneer Bay during the same period. The DPI field logs from the 1987 survey indicate that the area of seagrass that no longer exists was present at very low densities, with all survey locations indicating less than 1 per cent seagrass cover.
  - ◊ FRC Environmental has been surveying seagrass on a bi-annual basis in Pioneer Bay since 1995 on behalf of Whitsunday Shire Council. During this time, FRC has generally noted an increase in depth range of seagrass in Pioneer Bay. However, FRC advised that it has not observed seagrass at the depths reported in the 1987 DPI survey at densities greater than several blades per 100 square metres.
  - ◊ DPI acknowledges that the 1987 survey was broad scale, that fewer sites were sampled (delineation of the area of roughly 380 ha of seagrass that appears to have disappeared was based on about 12 survey points of which less than half showed seagrass) and that mapping discrepancies, at the time, may have been plus or minus 100 metres.
  - ◊ The area of seagrass in question was recorded in the 1987 study at a density less than 10 per cent (the lowest category used in the 1987 study). Subsequent discussions with DPI personnel and review of field notes indicates that the density of seagrass in the area in question was actually less than 1 per cent cover.
  - ◊ Seagrass is known to vary greatly in distribution depending on a number of factors. There are circumstances where seagrasses have appeared briefly in locations where they have not been observed before or have disappeared and reappeared.
  
- The recent survey conducted by FRC Environmental (August 2003) revealed that:
  - ◊ the total area of seagrass beds in Boathaven Bay is greater than 105 ha;
  - ◊ the development of marina and the associated navigation channel will result in the loss of patches of seagrass of approximately 16 ha (i.e. approximately 10 ha from the proposed marina footprint and approximately 6 ha from the navigation channel);
  - ◊ seagrass within the footprint of the proposed marina ranged between 6 and 60 per cent cover with overall cover just under 20 per cent;
  - ◊ overall cover of seagrass along the proposed channel decreases with depth, and is less than 1 per cent at the seaward end;
  - ◊ on a simple areal basis, the marina will result in the direct loss of approximately 15 per cent of the area of seagrass in Boathaven Bay, and probably less than 3 per cent of the seagrass of greater Pioneer Bay.
  
- Following review of the SEIS, EPA reported that “impacts to habitats (particularly variable and substantive seagrass beds) and associated flora and fauna are likely to occur should the marina proceed”.

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- Queensland Fisheries Service (QFS), Department of Primary Industries (DPI) does not support the project from a fisheries policy perspective. Section 8 of the DPI's *Fish Habitat Management Operational Policy FHMOP 001 – Management and Protection of Marine Plants (2002)* lists incompatible activities that are not supported by DPI due to their unacceptable impacts on mangroves, other marine plants and fish habitats or because they are incompatible with sustainability objectives of the *Fisheries Act 1994* and/or fisheries policies.
  - The POA proposal falls within a number of the above-listed activities. The policy recognises that, where there is whole-of-government support (Section 9.8, FHMOP 001) the policy principles may not fully apply, leading to the granting of an approval subject to appropriate mitigation and compensation of any impacts on, or losses of, marine plants and other fish habitats.
  - Table 1 of the DPI's *Fish Habitat Management Operational Policy FHMOP 005 – Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss (2002)*, lists the categories of minimum area requirements for authorisation of loss of marine fish habitat. POA fits within the "large" category, that is, approval is required where greater than 500m<sup>2</sup> (>0.05 ha) of vegetated or unvegetated tidal land is to be removed. While this policy is broad-based it has provision for taking into consideration individual site details.
  - EPA's stated preferred option was for relocation of the proposal to a new site within the Whitsunday region that does not impact on areas of marine flora. EPA requested that the Proponent provide an assessment of alternative sites and layouts for the development in an Addendum to the SEIS.
  - The Proponent provided a desktop assessment of 24 embayments along the Whitsunday mainland coast to identify any other sites that might compare favourably to Boathaven Bay from an environmental viewpoint. The study was limited to very broad comparisons only. In summary, most of the sites identified are relatively undisturbed compared to Boathaven Bay. Most of the sites had seagrass beds recorded to differing degrees and others had no records available. From its analysis, the Proponent believes that Boathaven Bay is the most suitable location for a marina development along the Whitsunday mainland coast, i.e. the site is more congruent with the principles of ESD than any other site in the region.
  - The proposal is consistent with Policies 2.1.2 and 2.1.3 of the State Coastal Management Plan. Components of these policies are:
    - ◊ land allocation for development should be limited to existing urban areas
    - ◊ new development within existing urban areas is preferred and should be undertaken so as to avoid or minimise adverse impacts on coastal resources
    - ◊ provision of new infrastructure should promote consolidation and separation of urban areas on the coast
    - ◊ in planning for appropriate land uses in areas adjoining the foreshore, adequate provision needs to be made for coastal-dependent land uses.
  - The Addendum also provides an evaluation of three alternative "marina only" footprint scenarios for a marina in Boathaven Bay. The Proponent advised that, although all of the alternatives would have lesser impacts on the intertidal zone than the current POA proposal, they are not financially feasible. The Proponent states that the costs of construction of the development could not be covered by the combined income generated from the sale or lease of marina berths and income generated from the operation of the marina and marina facilities. In the opinion of the Proponent, all

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three alternatives would require a mix of commercial, residential and tourism outlets to be developed in conjunction with the marina to be financially viable.

- DPI has advised that it will consider an application from the Proponent for a permit to remove protected marine plants under the provisions of the *Fisheries Act 1994*.
- The Proponent has agreed to negotiate, as part of the above permit process, mitigation measures acceptable to Queensland Fisheries Services, DPI, to offset the loss of fish habitats as a result of the development. The Proponent will provide mitigation measures prior to construction commencing.
- The following conditions have been developed to address DPI, EPA and GBRMPA concerns:

**Condition 1**

- (a) A permit must be obtained to remove protected marine plants, including saltcouch, mangroves and seagrass, under section 51 of the *Fisheries Act 1994*. The permit, which is to include mitigation measures, is to be obtained prior to construction commencing.**
- (b) A monitoring program for seagrass adjacent to the development site must be prepared in consultation with the Department of Primary Industries and submitted as part of all applications for development permits for the project. The monitoring program is to be developed in accordance with the Department of Primary Industries policy *FHMOP 001 (2002) Management and Protection of Marine Plants* and is to address, in accordance with *FHMOP 005 (2002) – Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss*, unacceptable impacts on seagrass beds and contingency measures for responding should those impacts be observed. Monitoring under the program is to be implemented as soon as possible prior to the commencement of construction and continue for a minimum of three years after construction of earthworks.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition recognises that local fish habitats, including otherwise protected marine plants, will be permanently lost and is therefore intended to minimise the impact of the development on the marine flora in Boathaven Bay while providing appropriate mitigation for the loss of those fish habitats.
- To minimise the impact the Proponent should:
  - ◊ submit an application for a permit to remove protected marine plants under the provisions of the *Fisheries Act 1994*.
  - ◊ negotiate mitigation measures with Queensland Fisheries Service, DPI, in accordance with *FHMOP 005*, upon submission and assessment of the abovementioned application.
  - ◊ implement a monitoring program for seagrass adjacent to the development site, in accordance with *FHMOP 001* which will commence as soon as possible and continue for a minimum of three years post-construction.

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## 4.7.2 Protected Species

### Dugong and Turtles

#### Findings on Material Questions of Fact:

- Boathaven Bay is not a Dugong Protection Area (DPA), nor is it in close proximity of a DPA.
- Comments made by the EPA in its submission on the SEIS and Addendum; and the Proponent in the Addendum, in relation to dugongs, were based on a report by Dr Helene Marsh of James Cook University commissioned by EPA. In summary this report states:
  - ◊ the Whitsunday region supports a relatively small population of dugong some of which feed in Boathaven Bay
  - ◊ knowledge of the use of the proposed site by dugongs is anecdotal at best
  - ◊ the Whitsunday region is not a major dugong area in the context of the eastern coast of Queensland as a whole
  - ◊ the seagrasses in the area include food species preferred by dugong
  - ◊ the distribution and biomass of seagrass off the Queensland coast vary over time
  - ◊ as seagrass meadows which support the preferred food species of dugongs are patchy in the Whitsundays, the loss of any of these meadows is likely to have some impacts on dugongs
  - ◊ given the area of seagrass in Boathaven Bay is relatively small, Marsh considered that most of the dugongs which now use the area would cease to do so if a significant portion of the seagrass is lost due to development construction and maintenance dredging. Whether this would cause these animals to delay breeding would depend on the availability of alternative seagrass habitat.
  - ◊ dugongs would certainly be able to relocate to other areas
  - ◊ the presence of the marina would be likely to increase mortality of dugongs should they continue to use the nearby remaining areas of seagrass (e.g. from boat strike). However, this is expected to be low, as information available suggests that Boathaven Bay area is not regionally important dugong habitat. Nonetheless, it could be regionally significant in view of the relatively low dugong density in the Whitsunday area
  - ◊ it would be prudent to introduce speed limits for vessels as in the Moreton Bay Marine Park
  - ◊ high levels of vessel traffic could prevent dugongs from accessing available seagrass. This could be regionally significant given the limited aerial extent of seagrass usually considered high quality dugong habitat in the Whitsunday region.
- The Marsh Report did not give a clear indication of the magnitude of potential impacts on dugongs and turtles and consequently the proponent and EPA have interpreted the findings of the report differently.
- The most recent survey of seagrass undertaken by FRC Environmental in August 2003 states that:
  - ◊ of the dominant species of seagrass in Boathaven Bay (and the greater Pioneer Bay), *Halodule uninervis*, *Halodule pinifolia*, *Halophila ovalis* and *Halophila spinulosa* are probably most favoured by dugong;
  - ◊ in tropical Queensland, dugong preferentially feed on seagrass of low density;
  - ◊ it is likely that dugong will be more frequently associated with the seagrass meadows of eastern Boathaven Bay, and of greater Pioneer Bay offshore and to

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the north-west of Boathaven Bay, rather than of western Boathaven Bay (i.e. the proposed marina site).

- EPA also has concerns about the impact of the POA proposal on marine turtles in the area. EPA suggests that the loss of vegetated and unvegetated benthic environs and increased boat traffic in Boathaven Bay has the potential to impact on the use of the area by Loggerhead, Green and Flatback turtles.
- The Proponent has indicated that it will carry out visual monitoring of the dredge area, before and during dredging, to detect dugong and turtles that may swim into the area. In the event that a dugong or turtle is observed, and provided that approval has been obtained from EPA, a small boat could gently drive the animal away from the dredging area and observe that it does not return. If approval to drive the animal away is not granted there will be a need to wait until it moves away of its own accord. Dredging will not commence if dugong and turtles are in the vicinity of the dredging vessel.
- EPA has advised that any attempt to drive protected fauna from the works area would be an offence under Section 88 of the *Nature Conservation Act 1992*. This Act does not provide for the conditional removal or relocation of fauna.
- Condition 2 below addresses this issue.

## **Migratory Birds**

### Findings on Material Questions of Fact:

- Migratory wader birds, including the Eastern Curlew (*Numenius madagascariensis*) were recorded in the intertidal zone during surveys for the IAS and SEIS.
- A number of migratory wader birds are protected under the *Nature Conservation Act 1992*. The Eastern Curlew is listed as rare under the *Nature Conservation (Wildlife) Regulation 1994* and the *Environmental Protection and Biodiversity Conservation Regulation 2000*.
- EPA states that the loss of 10.5 ha of unvegetated soft sediment substrates in the intertidal and shallow subtidal areas has the potential to adversely affect populations of migratory wader birds including the Eastern Curlew through the direct loss of feeding habitat and indirectly through the loss of tidal areas that will not be used by the species due to the close proximity of human activities.
- It is important to note that over 150 ha of intertidal area will remain in the eastern part of Boathaven Bay. These areas will continue to be available for utilisation by those species currently using the bay, although increased usage may be experienced.
- While the flats and intertidal area will be available for utilisation, it is possible that noise and lighting effects from the marina may decrease the suitability of the area for some species of bird. The extent of impact will depend on the extent to which the birds become accustomed to noise and illumination of the marina at night. Migratory birds have been known to forage and roost in close proximity to marina developments.
- The construction of the marina will result in the localised loss of feeding opportunities. However, as the area is already densely populated, is very popular for recreational

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boating, and experiences activity, noise and lights from vehicles using Shute Harbour Road, it is not expected that the development of a marina will have any major impact on the presence of wader birds from a human activities perspective.

- The Proponent has committed to:
  - ◊ gently scare away any migratory wader bird species which may be found in the construction area;
  - ◊ relocate any nests in consultation with EPA; and
  - ◊ minimise illumination to the intertidal area to the East of the marina by orienting principal lighting away from that area.
- EPA has advised that any attempt to drive protected fauna from the works area would be an offence under Section 88 of the *Nature Conservation Act 1992*. This Act does not provide for the conditional removal or relocation of fauna.
- Condition 2 below addresses this issue.

### **Relocation of Species of Conservation Significance**

#### Findings on Material Questions of Fact:

- Boathaven Bay contains species of conservation significance as noted in the discussion above.
- In the event that any species of conservation significance, which have not been identified during studies undertaken since 1985, are found to occur in the area, the Proponent has committed to:
  - ◊ consult with EPA to determine whether the species of conservation significance warrants relocation from the area, and if so to seek EPA's approval for relocation.
  - ◊ seek expert assistance to relocate these species.
- EPA has advised that any attempt to relocate protected fauna from the works area would be an offence under Section 88 of the *Nature Conservation Act 1992*. This Act does not provide for the conditional removal or relocation of fauna.
- The condition below addresses this issue.

### **Water Mice**

#### Findings on Material Questions of Fact:

- The water mouse is listed as Vulnerable in the national list of threatened species under the EPBC Act and as a Vulnerable species under the *Nature Conservation Act 1992 (Qld)*.
- Surveys undertaken by the Proponent as part of the SEIS showed no indication of water mice using habitat within the footprint of the proposed development. However, it was acknowledged that water mice might be using habitat within Campbell's Creek.
- The Campbell's Creek area will not be directly disturbed by the development. However, indirect impacts such as changes in water quality leading to a reduction in crustacean numbers, an important food source for water mice, could affect the viability of the possible water mouse population. This is especially likely to be the case if significant Acid Sulphate Soils are encountered during construction.

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- The Proponent has proposed a range of measures to control the quality of water discharging from the site during construction and operation. These measures are discussed later in this report.
  - Concern has been expressed about the water mouse population in the area and it was recommended that further surveys be undertaken to establish whether there are any water mice in the vicinity. If water mice are present, specific mitigation measures and a program to monitor the health of the population should be developed.
  - The Proponent has committed to:
    - ◊ undertake further surveys, during the preconstruction stage of the project, to identify whether water mice might occur in the Campbell's Creek area, if significant Acid Sulphate Soil is encountered during preconstruction surveys; and
    - ◊ if water mice are identified in Campbell's Creek, to establish a targeted monitoring and management program to ensure that the excavation of Acid Sulfate Soil and discharge of water from the site does not adversely impact on the species.

### **Condition 2**

- (a) A protected species management plan must be prepared in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project. The plan is to include:**
- **procedures for the observation and recording of dugong and turtle sightings in the area surrounding the site prior to and during dredging and pile driving activities, and the cessation of these works while dugongs and turtles are within the "exclusion zone" (i.e. within 150 metres of dredging or pile driving activities)**
  - **procedures for cessation of any works while migratory birds are within the "construction activity area" (i.e. within 25 metres of any construction activity) and minimisation of illumination of the intertidal area to the east of the site.**
  - **procedures for the temporary cessation of any works in the event that a species of conservation significance, which has not been identified during studies undertaken since 1985, is found to occur in the area.**
- (b) Dredging and pile driving for project construction must not be carried out whilst dugongs and turtles are within the exclusion zone.**
- (c) Construction must not be carried out whilst migratory birds are within the construction activity area.**
- (d) If significant Acid Sulfate Soil is encountered during preconstruction surveys, a survey of the Campbell's Creek area is to be undertaken by the proponent, prior to construction commencing, to determine the presence of any water mice. The survey is to be provided to the Environmental Protection Agency for review.**
- (e) If water mice are detected, a targeted monitoring and management program is to be established, in consultation with the Environmental Protection Agency, prior to construction commencing, to ensure that disturbance of Acid Sulfate Soil and discharge of water from the site does not impact adversely on the species.**

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### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to minimise the impact of the development on protected species in Boathaven Bay.
- To minimise the impact the Proponent must:
  - ◇ develop a protected species management plan including procedures for:
    - observation and recording of dugong and turtle sightings in the areas surrounding the site prior to and during dredging and pile driving activities and the cessation of these works while protected species are within the exclusion zone.
    - cessation of any works while migratory birds are within the construction activity area and minimisation of illumination of the intertidal area to the east of the site.
    - temporary cessation of any works in the event that any species of conservation significance, which have not been identified during studies undertaken since 1985, are found in the area.
  - ◇ if significant Acid Sulphate Soil is present, undertake a survey of the Campbell's Creek area, prior to the commencement of construction, to determine the presence of any water mice.
  - ◇ if water mice are detected, establish a targeted monitoring and management program, to ensure that disturbance of Acid Sulfate Soil and discharge of water from the site does not impact adversely on the species.

### **4.7.3 Boat Speeds**

#### Findings on Material Questions of Fact:

- The enforcement of boat speed limits will reduce the risk of injury to persons and damage to property and also reduce the risk of fatalities and injury to dugongs and turtles in the area due to boat collisions with these animals.
- Boating speed limits and number and location of speed limit signs are determined by Maritime Safety Queensland (Department of Transport) in accordance with s206A of the *Transport Operations (Marine Safety) Act 1994*. The enforcement of speed limits is the responsibility of the Queensland Boating and Fisheries Patrol (QFS, DPI) and the Queensland Water Police (Police Department).
- Based on discussions with GBRMPA and dugong researchers at James Cook University, the Proponent has suggested that a speed limit of 4 knots per hour be placed on vessels in the marina access channel.
- The Proponent has committed to erect and maintain signs indicating speed limits and also educational signs explaining the importance of adhering to those speed limits.
- Marina Management may refuse to allow boats exceeding the speed limit to use the marina facilities, however it will not have direct control over the boat ramp.



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### **Condition 3**

- (a) Boat speed signs are to be erected and maintained within the marina and access channel area by the proponent as directed by Maritime Safety Queensland (Department of Transport) in accordance with s206A of the *Transport Operations (Marine Safety) Act 1994*.
- (b) Educational signs explaining the importance of adhering to boat speed limits within the marina area and access channel are to be erected and maintained by the proponent. The specific number and location of, and information to be displayed on, the signs must be determined in consultation with Maritime Safety Queensland (Department of Transport) and the Environmental Protection Agency.

### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to reduce the risk of injury to persons and property and the risk of fatalities and injury to marine fauna from boat strike in Boathaven Bay.
- To minimise the risk the Proponent must erect and maintain boat speed limit signs and boating educational signs.

## **4.8 DREDGE SPOIL MANAGEMENT**

### Findings on Material Questions of Fact:

- In response to issues raised in submissions on the SEIS, the Proponent made a number of modifications to the POA Master Plan including that of the dredge spoil disposal area. The dredge spoil disposal area has been reduced in size from 15,000m<sup>2</sup> to 8,845m<sup>2</sup> by a careful examination of both the quantities, frequency of dredging and by reuse of dredged material as fill onsite. A reduction in the width of the entry channel from 60m to 40m also assisted in reducing spoil quantities. The containment area will have a storage capacity of 50,000m<sup>3</sup> of dredge spoil to accommodate construction and maintenance dredge spoil disposal.
- The dredge spoil disposal area will comprise sheet piling or an earth and rock bund within which dredge spoil will be placed. Construction of a bund will involve dumping of bund material, spreading using a bulldozer and lining the external wall with protective rock.
- Some sediment may inadvertently be released to the marine environment during this construction process. Sediments contaminated with tributyl tin (TBT) have been identified within the area. TBT is an effective anti-fouling agent used in marine paints, but has now been banned from further use. It is toxic to many marine organisms at very low concentrations. The re-suspension of marine sediments containing TBT and their safe disposal/containment will be addressed in a Dredge Management Plan.

- The construction of a bunded wall involving the initial spreading of fill over the seabed is only to be undertaken during the bottom half of the tide (prior to and after low tide) to minimise the dispersal of sediments.
- On completion of dredging for construction, the dredge spoil disposal area will be temporarily capped with a layer of topsoil and sown with grass and appropriate coastal vegetation to protect the surface of the reclaimed land from erosion until the area is required for maintenance dredge spoil disposal in future years. The Proponent has committed to erecting and maintaining security fencing and signage around the disposal area. The signage will advise the public of the long-term purpose of the area for dredge spoil disposal.
- A Dredge Management Plan is to be prepared by the Proponent. The Plan will include conditions to avoid potential impacts on mangroves, corals and seagrass. The Plan should also detail the proposed visual monitoring of dredge areas, including the extent and frequency of observations.

**Condition 4**

- (a) A Dredge Management Plan must be prepared in consultation with the Environmental Protection Agency, Department of Primary Industries and the Great Barrier Reef Marine Park Authority and be submitted as part of all applications by the proponent for development permits for the project. The Plan is to cover dredging for construction and maintenance, and disposal of dredge material especially contaminated sediments.
- (b) Arrangements to ensure that construction does not re-suspend sediments, particularly those contaminated with tributyl tin, into the water column or any discharge waters must be included in the Dredge Management Plan.
- (c) Construction channel dredging should take place between March and August in any year to minimise impacts on seagrasses and corals and to avoid the cyclone season.
- (d) As a requirement of tenure designation under the *Land Act 1994*, following reclamation works, the proposed dredge spoil disposal area marked 'R' on plan 'SK-031 by ML Design' as shown on page 2-17 of the Port of Airlie Addendum to the Supplementary EIS (April 2003) is to be maintained as a 'dredge spoil rehandling area' which is defined as "*a purpose built area into which spoil from maintenance dredging of the adjoining marina and associated access channel shall be stored until it is in a consolidated form that enables transportation to a facility that can lawfully accept such material*".
- (e) The dredge spoil disposal area must be stringently managed to ensure that adjacent fish habitats, including marine plant and coral communities are not adversely or permanently impacted. Management of this area is to be an integral element of the Dredge Management Plan.
- (f) Water quality baseline monitoring of turbidity, sediment pollutant concentrations and other parameters, within Boathaven Bay, Pioneer Bay and Campbell's Creek estuary, is to be undertaken prior to the commencement of construction.
- (g) The findings of the water quality monitoring program are to be used to determine water quality parameters for the Dredge Management Plan and trigger levels for each parameter above which work practices will need to be reviewed or suspended.

Reasons:

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- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
  - This condition has been formulated to control and limit any potential adverse impacts on marina flora and fauna in Boathaven Bay arising from the dredge disposal area.
  - To minimise impacts the Proponent must:
    - ◊ prepare a Dredge Management Plan to cover construction and maintenance dredging (including timing of dredging) and disposal of dredge material.
    - ◊ as part of a Dredge Management Plan, provide arrangements to ensure construction does not re-suspend tributyl tin contaminated sediments into the water column or any discharge waters.
    - ◊ stringently manage the dredge spoil disposal area to ensure that adjacent fish habitats, including marine plant and coral communities are not adversely impacted.
    - ◊ prior to commencement of construction, undertake water quality baseline monitoring of turbidity, sediment pollutant concentrations within Boathaven Bay, Pioneer Bay and Campbell's Creek estuary.

#### **4.9 STORMWATER MANAGEMENT AND WATER QUALITY MANAGEMENT**

##### Findings on Material Questions of Fact:

- EPA, DPI, and GBRMPA all raised issues in relation to stormwater runoff from the site and its effect on water quality, and subsequently mangroves and seagrass.
- Currently, stormwater from Shute Harbour Road and areas uphill as well as from the Coconut Grove area flows directly into Boathaven Bay, via culverts and overland flow.
- Flows from the Shute Harbour Road catchment will be directed into a tidal drain that will run parallel to Shute Harbour Road and then discharge to Boathaven Bay.
- Stormwater from the Coconut Grove catchment will flow into stormwater drains running through POA and discharging into the marina basin. The use of catch pits and trash racks on these stormwater flows will assist in removing some sediment and gross solids from stormwater generated in the Coconut Grove catchment as well as the POA catchments. These features are not currently present in the stormwater system draining the Coconut Grove catchment. This may lead to a reduction in sediment and gross discharges to Boathaven Bay via stormwater from the Coconut Grove catchment.
- Stormwater flows from the POA development are not expected to lead to a significant change in the quality of stormwater currently being discharged to Boathaven Bay via stormwater flows.
- The boat repair and hardstand facilities will have separate stormwater management systems.
- Oil/sediment separation facilities catch pits and trash racks will be considered during the detailed design stage. These facilities will be designed in accordance with the *Queensland Urban Drainage Manual* and relevant standards and requirements of the EPA and Whitsunday Shire Council.

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**Condition 5**

- (a) A detailed design of stormwater systems including an assessment of the stormwater runoff volume and any changes in quantity or quality of this runoff, as a result of the development, is to be prepared.
- (b) The findings of the stormwater runoff assessment are to be submitted to the Environmental Protection Agency, prior to submission of all applications for development permits for the project for the Environmental Protection Agency's review and comment of any further action which may be required by the development. The findings and any comments by the Environmental Protection Agency are to be submitted as part of all applications for development permits for the project.
- (c) Best practice environmental management technology sediment and litter control devices must be included on stormwater systems within the development in consultation with the Environmental Protection Agency.

**Reasons:**

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to control and limit any potential adverse impacts on marine flora and fauna in Boathaven Bay arising from poor water quality particularly from stormwater discharge from the site.
- To minimise impacts the Proponent must:
  - ◊ prepare, as part of the detailed design of stormwater systems, an assessment of the stormwater runoff volume that is to be channelled through the mangroves (adjacent to Shute Harbour Road) and any changes in quality of this runoff, as a result of the development.
  - ◊ submit the findings of the stormwater runoff assessment to EPA for review.
  - ◊ Include best practice environmental management technology sediment and litter control devices must be included on stormwater systems within the development.

**4.10 ACID SULFATE SOILS****Findings on Material Questions of Fact:**

- State Government assessment of coastal development projects which involve Acid Sulfate Soils (ASS) is undertaken by DNRM, EPA and DPI. The *Memorandum of Understanding for the Provision of Consistent Advice on Coastal Development Involving Acid Sulfate Soil* (MOU) establishes the role and responsibilities of each agency in relation to the provision of advice on coastal development projects involving ASS. Annexure A of the MOU, assigns DNRM the role of coordinating advice for activities involving ASS referred to it under the SDPWOA. Annexure B allows for EPA and DPI to provide appropriate and timely advice to DNRM to allow that agency to coordinate input to activities referred under the SDPWOA.
- Prior to finalisation of the Terms of Reference for the SEIS, the Proponent requested that consideration be given to undertaking detailed Acid Sulfate Soil (ASS)

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investigations after the impact assessment process but prior to the commencement of site works. The basis for this request was that some ASS information was known through investigations which had been undertaken for the original IAS in 1998.

- DNRM and EPA both determined that the tests previously undertaken were not completed to the standards set out in the *Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils in Queensland, 1998*, particularly in relation to the number and depth of samples taken. These guidelines were not available at the time of preparation of the original IAS.
- Following further discussions DNRM and EPA agreed to allow the Proponent to defer full ASS investigation until after the impact assessment process. However, both Agencies requested that samples be taken from an additional five boreholes at appropriate depths, analysed and details provided to them for review.
- Limited sampling to date has not identified significant occurrence of ASS in Boathaven Bay.
- The Proponent was requested to provide a “worst-case” scenario ASS Management Plan and estimate of treatment cost. Based on ASS investigation and treatment procedures, the following condition has been determined to address DNRM and EPA concerns.

**Condition 6**

- (a) Prior to the commencement of any site works an Acid Sulfate Soil (ASS) investigation must be undertaken for all land, seabed, soil and sediment at or below 5m Australian Height Datum (AHD) and where:
- excavation is proposed; or
  - filling of land involving more than 500m<sup>3</sup> of material at greater than an average depth of 0.5m is proposed.
- (b) The ASS investigation must:
- be in accordance with the methods prescribed in the *Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils in Queensland Ahern et al 1998*) and the *Queensland Government Instructions for the Treatment and Management of Acid Sulfate Soils 2001*. Soil and/or sediment profiles should be mapped at a suitable scale and described according to the *Australian Soil and Land Survey Field Handbook (McDonald et al 1990)* and *Australian Soil Classification (Isbell. 1996)*;
  - be conducted by a certified professional soil scientist;
  - be submitted to the Department of Natural Resources and Mines prior to any proposed works commencing; and
  - where the investigation indicates that construction activity may be detrimental to the marine environment, serve as the basis for an ASS Management Plan, prepared in accordance with the guidelines and instructions above and the draft Environmental Management Plan, as outlined in the Supplementary Environmental Impact Statement, for implementation in a manner acceptable to the Department of Natural Resources and Mines.
- (c) In the event that sampling reveals ASS to be present, a background groundwater monitoring program must be undertaken for areas adjoining the proposed development in accordance with the requirements of the Environmental Protection Agency prior to commencement of any works within the development lease area.

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Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- Investigation and management of ASS is required to protect the environment.
- This condition is designed to control and limit potential impacts of ASS on waters and ecological systems by requiring appropriate investigation of the potential of ASS in Boathaven Bay and providing for any necessary management during development and use.
- To minimise impacts the Proponent must:
  - ◊ undertake an ASS investigation prior to the commencement of any works within the development lease area.
  - ◊ If ASS are shown to occur:
    - prepare an ASS Management Plan
    - undertake a background groundwater monitoring program in areas adjoining the proposed development in accordance with the requirements of EPA prior to the commencement of any works within the development lease area.

#### **4.11 HYDRODYNAMIC MODELLING**

Findings on Material Questions of Fact:

- Extensive hydrological modelling was undertaken for the original IAS in 1998. Because the previous hydrodynamic studies for the significantly larger proposal showed little impact on water flows/circulation patterns/current velocities in Boathaven Bay, the Proponent has not undertaken new studies for the current proposal which is smaller and less complex than the previous proposal.
- However, the Proponent has committed to undertake hydrodynamic modelling prior to commencement of site works.

***Condition 7***

- (a) Hydrodynamic modelling of Boathaven Bay is to be undertaken in the detailed design stage prior to construction commencing, to ascertain impacts on the bay's hydrodynamic regime. The detailed hydrodynamic modelling is to be undertaken in accordance with the requirements of the Environmental Protection Agency and will include:**
- **assessment of storm surge level;**
  - **assessment of sedimentation rates;**
  - **dredge plume modelling; and**
  - **assessment of erosion processes on the artificial beach.**
- (b) The findings of hydrodynamic modelling must be submitted as part of all applications for development permits for the project.**
- (c) Management responses/actions considered relevant by the Environmental Protection Agency and Department of Primary Industries must be included in the Dredge Management Plan.**

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Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to ascertain the development's impacts on Boathaven Bay's hydrodynamic regime.
- The Proponent must:
  - ◊ undertake hydrodynamic modelling of Boathaven Bay, in the detailed design stage, in accordance with the pre-determined requirements of EPA.
  - ◊ submit the findings of hydrodynamic modelling to EPA and DPI for review.
  - ◊ to minimise impacts, include management responses/actions considered relevant by EPA and DPI in the Dredge Management Plan.

#### **4.12 MANAGEMENT OF ARTIFICIAL BEACH**

Findings on Material Questions of Fact:

- A public beach, approximately 10,375m<sup>2</sup> in area, is to be constructed on the ocean side of the breakwater at the northern extremity of the development. The beach breakwater will be constructed with 25,000m<sup>3</sup> of selected fill from the excavation of the marina basin, overlain by one metre of clean sand (35,000m<sup>3</sup>). Sufficient sand may be available from material to be excavated from the site. Any additional sand will be sourced from licenced sand extraction areas in the Don River near Bowen. All the material will be placed by dozer, pushing the material out from the back of the beach during the bottom half of the tide.
- The engineering design of the beach will be focussed on ensuring that the beach integrates well into the existing coastal environment. Potential sand losses will be minimised by careful design, however there will likely be the need for some rehabilitation and possible re-nourishment following particularly severe events, e.g. storms and cyclones.
- EPA has raised concern about the long-term arrangements for the maintenance of the beach.
- The Proponent advised in the Addendum that an agreement has been reached with the Whitsunday Shire Council whereby the artificial beach will become Crown Land under the control of Council as Trustee.
- DPI has raised the need to consider sand grain size with respect to potential habitat for biting midges.
- The following condition reflects EPA and DPI concerns.

***Condition 8***

**With respect to the artificial beach, which is to be constructed as part of the project, the following information is to be submitted to Whitsunday Shire Council**

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**and the Environmental Protection Agency for its comment prior to any application for a development permit being lodged:-**

- **details of material from which the beach is to be constructed;**
- **volume of the material required for the beach;**
- **dimensions of the beach (including width);**
- **strategy for managing midges;**
- **copy of Agreement for funding and carrying out re-nourishment and maintenance works.**

**The details and Council's comments, if any, in relation to those details are to be submitted as part of all applications for development permits for the project.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to ensure that the beach is constructed and maintained to an agreed standard.
- To maintain appropriate standards the Proponent must submit, prior to any applications for development permit for the project, the information requested above to the Whitsunday Shire Council and EPA.

#### **4.13 NOISE**

Findings on Material Questions of Fact:

- The excavation and reclamation stage of the development is expected to take approximately nine months.
- Typical noise emissions associated with the construction equipment that may be used in the POA project (e.g. bulldozers, hydraulic excavators, graders, vibratory rollers, haul trucks etc.) are expected to be between 70 - 80 decibels at 30 metres.
- Pile driving generally has much higher noise levels than commonly associated with general earthmoving plant and equipment. Depending on the method of pile driving used, the overall range of typical levels is between 66 - 96 decibels at 30 metres, this equates to an overall range of around 48 - 82 decibels at 150 metres.
- The POA project will involve both standard and sheet pile driving. The SEIS indicates that a substantial loss of amenity will occur at nearby sensitive places, including residences, hotels and resort-style accommodation facilities, during the time of pile driving.
- The vibration and noise from construction may impact on marine animals.
- Following considerable negotiation, maximum operational noise emissions and monitoring levels have been agreed between the Proponent and EPA.



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- These levels, which are designed to control and monitor noise emissions during the construction and operation of the marina, are included in the attached EPA conditions (refer Appendix 1, Schedule 2 - EPA Conditions). The proposed conditions are to be attached, by EPA, to any development approval for POA.
  - In addition, the Proponent has committed to implementing noise mitigation strategies (including community consultation) prior to commencement of site works.

**Condition 9**

**A Construction Noise Management Plan is to be prepared in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project. The plan is to include consultation with affected members of the community and measures to minimise impacts on these individuals.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- The development of a Construction Noise Management Plan and adherence to EPA noise level limits will mitigate the impact of noise on the local community.
- To limit the level of noise emitting from the site the Proponent must:
  - ◊ prepare and submit a Construction Noise Management Plan as part of all applications for development permits for the project.
  - ◊ abide by EPA noise emission limits.

#### **4.14 ROADS**

Findings on Material Questions of Fact:

- The SEIS proposed two points on Shute Harbour Road to allow access to the site for motor vehicles (and trailers), commercial vehicles, buses and emergency vehicles. The locations were at Coconut Grove and further east along Shute Harbour Road.
- The first access point at Coconut Grove has been accepted as appropriate by all relevant parties. The other access point to Shute Harbour Road required considerable negotiations with the Department of Main Roads (DMR).
- The second access point outlined in the SEIS proposed road access to the site from Shute Harbour Road to allow direct access to the transport interchange station, public boat ramps and loading/servicing facilities.
- DMR advised that it did not favour access to the site at this second point on safety and transport efficiency grounds. DMR suggested that access to the development, including the proposed transport interchange station should be through internal roads from the Shute Harbour Road/Coconut Grove intersection.
- The Department of Emergency Services (DES) was consulted in relation to access to the site for emergency vehicles. DES indicated its preference for two access points as this would provide greater security of access to the site by emergency vehicles in case of either being blocked.

- The Addendum presented a new access arrangement from Shute Harbour Road:
  - ◊ limited access to the site from Shute Harbour Road at the original proposed intersection midway between Hermitage Drive and Coconut Grove. This allowed vehicles to make a left turn into the site at this point. No egress was proposed from the site to Shute Harbour Road from this point.
  - ◊ full access to the site from a new roundabout on Shute Harbour Road opposite Hermitage Drive.
- This arrangement will result in additional loss of some mangrove area (approximately 0.75 ha) that might otherwise have been preserved. Any impact of road works on protected marine plants and fish habitats will need to be resolved with DPI.
- DMR has agreed in principle with the amended proposal for access to the site.
- A road infrastructure agreement to specify and formalise matters relating to addressing road impacts for the various stages of the project will need to be entered into by the Proponent and the DMR prior to the commencement of construction. The Agreement should cover reconsideration of traffic and road impacts and proposed mitigation measures for every stage of the project to ensure that the assumptions adopted in the current EIS process are still valid and acceptable to the DMR at future stages. In the final stage reassessment, the Proponent should, in addition, consider traffic impacts ten years beyond the opening of the final stage.
- Land to be allocated for the development should take into account a set back from the existing constructed Shute Harbour Road to accommodate a future four-lane upgrading of the road.
- DMR has suggested a number of mitigation measures in relation to this and other road impacts for the proposed development and these are reflected below.

**Condition 10**

- (a) A Traffic Management Plan (TMP) for each of the proposed development stages must be prepared by the proponent in consultation with the Department of Main Roads and Whitsunday Shire Council and submitted as part of all applications for development permits for the project, to give effect to s3.5.32(2) of the *Integrated Planning Act 1997*. The final TMP must consider impacts 10 years beyond the last development stage. The TMP shall address matters which include:**
- public parking to be provided on site;
  - traffic to be generated by the proposed development and the impact by the proposed development on the external road network;
  - proposed ingress and egress point to the site;
  - any access and intersection treatment required due to development traffic at the Coconut Grove/Shute Harbour Road and Hermitage Drive/Shute Harbour Road intersection (and any other intersection that may be affected);
- (b) An infrastructure agreement with the Department of Main Roads, is required, prior to the commencement of construction, to implement any road impact mitigation measures identified in the TMP, to give effect to s42(4) of the *Transport Infrastructure Act 1994*.**
- (c) Any access and intersection treatment identified by the TMP to be required due to development traffic at the Coconut Grove/Shute Harbour Road, Hermitage Drive/Shute Harbour Road intersection, the mid-block access**

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between Coconut Grove and Hermitage Drive and any other intersection that may be affected by the development must be carried out by the proponent at the proponent's cost.

- (d) All intersection and access treatments must be designed to accommodate pedestrians and cyclists.
- (e) Any drainage works on Shute Harbour Road required to ameliorate the impact of drainage from the site must be funded by the Proponent.
- (f) Consultation is required with the Department of Main Roads and Whitsunday Shire Council for the preferred traffic control of crossings on State-controlled and local roads respectively. For State-controlled roads (ie Shute Harbour Road) the treatment of pedestrian crossings is to be in accordance with the Department of Main Roads *Manual of Uniform Traffic Control Devices*. Detailed design must have regard to specific pedestrian user groups such as children, the aged and people with disability.
- (g) All roadworks and associated works are to be located to accommodate the upgrading of Shute Harbour Road to four lanes.
- (h) All works within the road reserve require prior approval from the Department of Main Roads and must be designed and constructed by Department of Main Roads pre-qualified consultants and contractors, and meet Department of Main Roads standards and specifications.
- (i) Land, determined in accordance with Department of Main Roads design guidelines, is to be set aside as road reserve for the future four lane upgrading of Shute Harbour Road.
- (j) Further traffic modelling, in accordance with the requirements of the Department of Main Roads' *Guidelines for Assessment of Road Impacts of Development Proposals (2001)* must be undertaken during the detailed design stage prior to construction commencing. This will include sensitivity testing in relation to changes in modal splits, particularly increased car trips to the site.

#### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to control and limit any potential adverse impacts on traffic, the road network in and around the site and planning of the State-controlled network during the construction and operational phases.
- To minimise impacts the Proponent must:
  - ◊ prepare, in consultation with DMR and Whitsunday Shire Council a TMP for each stage of the development
  - ◊ enter into an infrastructure agreement with DMR, prior to the commencement of construction, to implement any road mitigation measures identified in the TMP.
  - ◊ provide for future upgrading of Shute Harbour Road to four lanes.

#### **4.15 PUBLIC BOAT RAMP**

##### Findings on Material Questions of Fact:

- The SEIS and Addendum for the Port of Airlie development provided for the construction of a two lane public boat ramp with a central queuing pontoon at least 20m in length and car/trailer parking for 45 units.
- In its submissions addressing the SEIS and the Addendum the Department of Transport (DoT) indicated that it considers an additional ramp lane and an extra 25 car/trailer parking units are required at the site to meet the shortage of boat launching capacity in the region.
- Following negotiations between DoT and the Proponent, it has been agreed that the Proponent would provide a three-lane public boat ramp with a queuing pontoon and at least 70 car/trailer parking units for use by boat ramp patrons. The boat ramp and parking area is to be designed in accordance with the following DoT standards:
  - ◊ Drawing Number Misc-36-1-18 “Continuously Reinforced Concrete Boat Ramp: General Arrangements and Design Procedure”; and
  - ◊ Drawing Number Misc-36-1-8 “Standard Drawings Relating to Car Parking and Manoeuvring Areas, Dimensions of Parking Lanes and Parking Bays, Traffic Control and Signage”.
- The following condition reflects this agreement.

**Condition 11**

- (a) A three-lane public boat ramp with a queuing pontoon must be provided. The queuing pontoon should be at least 20 metres long with a T or L head.**
- (b) At least 45 car/trailer parking spaces adjoining the boat ramp and overflow parking for at least 25 car/trailers in close proximity to the boat ramp are to be provided.**
- (c) The boat ramp is to be designed and constructed in accordance with Department of Transport’s standard Drawings Misc-36-1-18 and Misc-36-1-8.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General’s Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to ensure that the appropriate amount of boat ramp facilities and parking are provided within the development to cater for current and future demand; and that ramps are constructed in accordance with DoT standards.
- To support appropriate boat ramp facilities the Proponent must:
  - ◊ provide a three-lane public boat ramp (with queuing pontoon) and at least 70 parking units in close proximity of the boat ramps.
  - ◊ design the boat ramps in accordance with DoT standard Drawings Misc-36-1-18 and Misc-36-1-8.

**4.16 PUBLIC TRANSPORT INTERCHANGE**

Findings on Material Questions of Fact:

- The Department of Transport (DoT), in reviewing the SEIS and Addendum, has determined that the analysis of peak hour bus usage into the site has been calculated on the current services and does not take into consideration future possible demand.

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- DoT has advised that additional analysis should be undertaken to estimate future demand and its likely impacts on the public transport interchange.

**Condition 12**

- (a) Further detailed analysis of peak-hour long-distance and local bus use of the public transport interchange, including a comparison of current and predicted future number, size and frequency of vehicles, is to be undertaken during the detailed design stage, to ensure that the bus terminal capacity takes potential future growth into consideration.**
- (b) The findings of the above analysis and any recommendations for further action are to be provided to the Rockhampton Office of the Department of Transport for review. Department of Transport recommendations, together with the analysis are to be submitted as part of all applications for development permits for the project.**
- (c) The public transport interchange is to be constructed during the initial stage of the planned development sequence.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This Condition is designed to ensure that future peak-hour long-distance and local bus use is taken into account in project detailed design.
- In detailed design work the Proponent must:
  - ◊ undertake further analysis of peak-hour long-distance and local bus use to cover future possible demand,
  - ◊ submit analysis to the Rockhampton office of the Department of Transport to determine any action required.
  - ◊ construct the public transport interchange during the initial stage of the planned development sequence.

#### **4.17 WHITSUNDAY SHIRE COUNCIL ISSUES**

Findings on Material Questions of Fact:

- The Proponent has held ongoing discussions with the Whitsunday Shire Council in relation to Council-specific issues for the proposed development. The latest summary of project details and commitments was provided to Council by the Proponent on 1 May 2003.
- Where the content of the report entitled "Response to Whitsunday Shire Council from Windward AB Pty Ltd to enable Whitsunday Shire Council to complete its submission on the Supplementary EIS for the Port of Airlie Marina Development Project, Airlie Beach, Whitsundays", dated April 2003, received by Whitsunday Shire Council on 1 May 2003 is inconsistent with other documentation associated with the development proposal, the former document (i.e. that received on 1 May 2003) is to prevail.

- Council has advised that it is prepared to act as the Assessment Manager in relation to the IDAS process for the proposed development. Where it is not the nominated Assessment Manager it wishes to be considered as a Concurrence Agency.
- Development is to be in accordance with Whitsunday Shire Council's Planning Scheme codes and policies applicable to the Shire at the time of development, as if these codes and policies apply to land that is the subject of the development and the land is to be considered as zoned "Commercial" and "Residential" under the Council's Planning Scheme applicable at the time.
- Council has advised that the following further development permits are required:
  - Operational Works*
    - \* *Earthworks and retaining walls*
    - \* *Internal and external roadworks*
    - \* *Internal driveways and car parking*
    - \* *Landscaping*
    - \* *Stormwater drainage*
    - \* *Water supply and sewer reticulation*
  - Plumbing and Drainage Works*
  - Building Works*
  - Material Change of Use (code assessment)*
- In addressing the SEIS and Addendum, the following indicative conditions are recommended.

### **Condition 13**

**The following indicative standard conditions are to be applied by Whitsunday Shire Council to the preliminary approval:**

#### **Clearing, Landscaping and Fencing**

**Any vegetation removed shall be disposed of to the requirements of the Whitsunday Shire Council. Transplanting, chipping or removal from site are the preferred solutions.**

**Landscaping shall be undertaken in accordance with Whitsunday Shire Council's codes and policies applicable at the time of development and shall be maintained thereafter to the satisfaction of Council.**

#### **Building**

**Prior to issue of any Development Permit, certificates of structural and geotechnical compliance with Australian standards shall be provided by both Structural and Geotechnical Engineers. All work shall be supervised by the Structural and Geotechnical Engineers and a Certificate of Completion provided to Whitsunday Shire Council prior to occupancy of any buildings.**

#### **Water Reticulation**

**The development shall be connected to Whitsunday Shire Council's water network, to the requirements of Council, prior to commencement of the use.**

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All internal and external water reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's codes, policies, standards and specifications, applicable at the time and where relevant, to the Council's requirements.

#### **Sewer Reticulation**

The development shall be connected to Whitsunday Shire Council's sewerage, to the requirements of Council, network prior to commencement of use.

All internal and external sewerage reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's codes, policies, standards and specifications, applicable at the time and where relevant to the Council requirements.

#### **Driveways and Parking**

All internal accesses, internal driveways, circulation roads, commercial vehicle provisions, car parking and manoeuvring areas shall be designed in accordance with AS 2890 and comprise a sealed pavement to Whitsunday Shire Council's requirements.

Turnarounds and intersections shall be provided to cater for garbage collection trucks and tourist buses to the requirements of Whitsunday Shire Council.

#### **Stormwater and Flooding**

All stormwater drainage works are to be designed and constructed in accordance with the Queensland Urban Drainage Manual and Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

#### **Road Works**

All roads, to be dedicated as public road within the development site, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

All roadworks external to the site, required to be undertaken as a result of the development, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

#### **Electricity and telecommunications**

The proposed development shall be connected to electricity and telecommunications to the requirements of the relevant authority.

#### **Developer Contributions**

Contribution towards water supply headworks and sewerage reticulation headworks and any other Whitsunday Shire Council infrastructure able to be lawfully imposed by Council, shall be paid to Council prior to commencement of the use on site. The contributions shall be paid in accordance with the rates

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**applicable at the date of payment.**

### **Miscellaneous**

**Any alterations, relocations, or upgrading work necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from or in connection with the development, or roads and drainage necessary as a result of the development, shall be at full cost to the developer.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- A number of development permits will be required from Whitsunday Shire Council for construction of the project. Council has developed a range of standard conditions for the infrastructure matters within its area of responsibility, which need to be addressed for this project.
- To meet development permit requirements the Proponent must comply with the infrastructure related conditions determined by Whitsunday Shire Council.

### **4.18 LOCAL INDUSTRY POLICY**

#### **Findings on Material Questions of Fact:**

- The Queensland Government introduced the Local Industry Policy – A Fair Go for Local Industry (LIP) in December 1999.
- LIP is designed to ensure Queensland and Australian manufacturers, contractors and suppliers are given a fair and reasonable opportunity to participate in:
  - ◇ Queensland Government funded infrastructure and resource projects in excess of \$5 million and projects less than \$5 million that are of regional or strategic significance;
  - ◇ other major projects where the Government has provided a significant contribution in the form of financial support.
- LIP requires an Industry Participation Plan to be completed by Proponents of projects that fall within the above categories.
- The Government has committed up to \$2 million to the POA project for public infrastructure. Therefore, POA falls within the second category.
- The Proponent has committed to ensuring that the intent of the policy is implemented.
- With a LIP there is more likelihood that local industrial suppliers and service providers would enjoy some of the opportunities flowing from all stages of the POA development, which would increase the individual firms' competitiveness and boost regional development.



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**Requirement 1**

**An Industry Participation Plan is to be prepared in accordance with the requirements of the Queensland Government's Local Industry Policy, March 2001 and is to be submitted as part of all applications for development permits for the project. The Plan is to be prepared in consultation with the Industry Capability Network (Queensland).**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- The development of an Industry Participation Plan will maximise local employment opportunities afforded by POA, boost regional development and assist local industry to become more competitive.
- To support local industries the Proponent must prepare an Industry Participation Plan in consultation with the Industry Capability Network (Queensland) and is to be submitted as part of all applications for development permits for the project.

#### **4.19 WORKER HOUSING**

##### Findings on Material Questions of Fact:

- Accommodation will be needed for up to 35 construction employees during the initial 18 months of earthworks and land reclamation.
- In the following five years the various buildings and other structures will be constructed. The workforce for this has been estimated at 800 employee years spread over five years, an average of 160 workers at any one time.
- Following review of the SEIS, the Department of Housing stated its key areas of concern in relation to the project. These included:
  - ◊ possible impacts of the proposed construction and operational workforce on demand for affordable accommodation in the area, that cannot be met from available stock (e.g. increased rents, declining availability of rental housing stock and reduced security of tenure for existing residents).
  - ◊ increased demand for services likely to be experienced by the Department of Housing and funded community housing and assistance providers if adverse impacts occur.
  - ◊ availability of affordable accommodation for students attending the proposed maritime training facility.
- The Proponent was requested to provide further information including workforce numbers and timing of workforce requirements. These matters were addressed to some degree in the Addendum. However, the Department of Housing still has some remaining concerns and has recommended that Conditions are imposed to address these matters.

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- The Whitsunday Shire Council may need to consider similar conditions which would be applicable to future construction of buildings and other developments on the land.

#### **Requirement 2**

- (a) Following the signing of any construction contract for development on the site, the proponent must submit quarterly reports to the Department of Housing providing details of workforce numbers, including estimates of recruitment from local sources and a breakdown of project accommodation requirements for accompanied and unaccompanied non-local workers.**
- (b) Following the signing of any construction contract for development on the site, the proponent must provide the Department of Housing with a copy of the contractor's plans for accommodation of accompanied and unaccompanied non-local workers and information about procedures for implementation of those plans.**
- (c) The proponent and its contractors must liaise with the Department of Housing to identify appropriate data on the projects impacts on the availability of rental accommodation.**

#### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This requirement is designed to ensure appropriate level of housing for the project workforce.
- To minimise impacts the Proponent must:
  - ◊ provide to the Department of Housing quarterly reports on workforce numbers, including estimates of recruitment from local sources, a breakdown of projected accommodation requirements for accompanied and unaccompanied non-local workers, contractor's accommodation plans and procedures for their implementation.
  - ◊ liaise with the Department of Housing to identify appropriate data on the project's impacts on the availability of rental accommodation.

#### **4.20 TOURIST AND PERMANENT RESIDENTIAL ACCOMMODATION**

##### Findings on Material Questions of Fact:

- The accommodation component of the development will comprise a mix of tourist and permanent residential accommodation.
- The Proponent estimates (see correspondence from consultant, WS Group, dated 20 May 2003) that approximately 11 per cent of the accommodation component will be used for permanent residential accommodation, and the remaining 89 per cent is intended as tourist accommodation.
- Any substantive variation to these figures (i.e. + or – 10 per cent) must be justified to the Coordinator-General prior to construction commencing.

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- This issue is addressed in Requirement 4(c).

#### **4.21 COMMERCIAL AND RETAIL ACTIVITIES**

##### Findings on Material Questions of Fact:

- Approximately 4,400m<sup>2</sup> of space has been allocated to retail and commercial uses within the development.
- Commercial/retail floor area split will be approximately 50/50 (see correspondence from consultant, WS Group, dated 20 May 2003).
- The bulk of the commercial component of the development is to be allocated to businesses directly associated with the marina and maritime transport services operating from the marina.
- The proposed retail capacity is necessary to support the tourism function of the development. The Whitsunday Shire Council's draft Retail Development Strategy identified the need for an additional 4,000 m<sup>2</sup> of retail floor space for Airlie Beach. POA will provide some of this additional retail space.
- Any substantive variation to these figures (i.e. + or – 10 per cent) must be justified to the Coordinator-General prior to construction commencing.
- This issue is addressed in Requirement 4(c).

#### **4.22 CULTURAL HERITAGE**

##### Findings on Material Questions of Fact:

- An assessment of Indigenous and European Cultural Heritage was undertaken by Northern Archaeology Consultancies Pty Ltd (NAC) in June-October 1998, as part of the 1998 Port of Airlie Draft Impact Assessment Study (IAS).
- The NAC assessment produced no archaeological evidence of Indigenous and European cultural heritage sites within the study area. It has been predicted that there is a low potential that intact archaeological sites might remain undiscovered in the study area.
- To renew the consultation process with Traditional Owners, the Proponent held further meetings in October-November 2002 to discuss the revised Port of Airlie proposal and to identify any concerns not already raised in the 1998 IAS. This information was included in the SEIS.
- As an outcome of these activities and also on advice from Department of Aboriginal and Torres Strait Islander Policy (DATSIP) in addressing the Addendum, the Conditions listed below have been formulated.
- The Proponent has indicated that a separate Cultural Heritage Management Plan will not be developed for the project on the basis that no significant archaeological or cultural heritage sites have been identified within the development area. However,

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the Conditions noted below will be incorporated into the Environmental Management Plans for design, construction and operation.

**Requirement 3**

- (a) The nominated Traditional Owner representatives must be provided with an opportunity to be involved in any monitoring of land and sea cultural heritage during critical parts of the construction phase where coastal areas are first disturbed.**
- (b) If any suspected evidence of cultural heritage remains is detected in surface or sub-surface deposits during any stage of the project, activities at the site must be halted and the Proponent must make contact with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and Traditional Owner representatives (where indigenous cultural heritage material is suspected). If finds of cultural heritage significance are made, an appropriate management and mitigation strategy is to be determined in consultation with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and the Traditional Owners (where indigenous cultural heritage material is found).**
- (c) If requested by the Traditional Owners, information on cultural heritage of the Whitsunday area is to be incorporated into any interpretive material provided as part of the Port of Airlie development.**
- (d) Requirements (a) to (c) above are to be included in the Environmental Management Plans (EMPs) for design, construction and operation. The EMPs should also address any development-related negative social impacts to Aboriginal and Torres Strait Islander people in the area, which are identified by the Department of Aboriginal and Torres Strait Islander Policy.**

Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This requirement is designed to ensure the involvement of local Traditional Owners in the assessment of Indigenous Cultural Heritage on the site.
- To involve Traditional Owners in project cultural heritage matters the Proponent must:
  - ◊ provide an opportunity for Traditional Owner representatives to be involved in monitoring of land and sea cultural heritage during the critical parts of the construction phase.
  - ◊ halt activities and make contact with the Regional Manager, Cultural Heritage Branch, EPA and the Traditional Owners, if appropriate, should any suspected evidence of cultural heritage remains be detected in surface or sub-surface deposits.
  - ◊ if finds of cultural heritage significance are made, determine an appropriate management and mitigation strategy in consultation with the Regional Manager, Cultural Heritage Branch, EPA and the Traditional Owners (where indigenous cultural heritage material is involved).
  - ◊ maintain ongoing consultation with the Traditional Owners for the duration of construction.

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- ◊ if requested by Traditional Owners, incorporate information on cultural heritage of the Whitsunday area into any interpretive material provided as part of the project.
  - ◊ include the points above in Environmental Management Plans (EMPs) for design, construction and operation.
  - ◊ address in the EMPs, any development-related negative social impacts to Aboriginal and Torres Strait Islander people in the area which are identified by the Department of Aboriginal and Torres Strait Islander Policy.

#### **4.23 SECONDARY ISSUES**

A number of less critical matters were resolved with the provision of additional information, clarification and more detailed explanation by the Proponent. The more significant of these are discussed below.

##### **4.23.1 State Coastal Management Plan**

In addressing the SEIS, EPA stated that the POA development was inconsistent with a number of policies of the State Coastal Management Plan (SCMP). In commenting on the Addendum, EPA updated information in relation to project inconsistencies with the SCMP indicating that the development (as amended in the Addendum) was inconsistent with policy 2.8.3 of the SCMP. Policy 2.8.3 focuses on the maintenance of biodiversity and is one of about 50 policies introduced by the Queensland Government in August 2001 to provide a vision and direction for coastal management in Queensland.

The State Coastal Management Plan defines biodiversity as:

*“The natural diversity of native wildlife together with the environmental conditions necessary for their survival. Includes regional diversity, that is, the diversity of the landscape components (landforms, soils, water, climate, wildlife and land uses) of a region, and the functional relationships that affect environmental conditions within ecosystems; ecosystem diversity, that is, the diversity of the different types of communities formed by living organisms and the relations between them; species diversity, that is, the diversity of species; and genetic diversity, that is, the diversity of genes within each species” (Section 10 Nature Conservation Act 1992)*

Policy 2.8.3 broadly classifies threats to biodiversity as habitat loss, decline in habitat quality, changes in ecological processes and direct removal of species. The direct impacts of the POA development on marine floral communities and other intertidal habitats of Boathaven Bay will result in the loss of approximately:

- ◊ Up to 16 ha of seagrass meadows of varying density, typically below 20%, with around 50% of this being in the intertidal zone i.e. exposed at low tide (August 2003 survey)
- ◊ 3 ha of mangroves (constituting 4% of this habitat type in Boathaven Bay)
- ◊ 10.5 ha of unvegetated soft sediment substrate in intertidal and shallow subtidal areas.

Policy 2.8.3 is one component of a much broader policy, the overall intent of which is to manage the coastal resources of Queensland for the benefit of Queenslanders, including social and economic benefits. The POA development is expected to produce a number of advantages for the region including:

- ◊ significant economic activity and job growth;
- ◊ high quality tourist, residential, commercial and public open space which would provide a new focus for activities in Airlie Beach; and
- ◊ new passenger facilities for boat and long distance bus passengers.

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As stated above, EPA has indicated that the POA development is inconsistent with one of the policies of the SCMP. The proposal aligns with all other policies, in particular Policy 2.1.2 - Settlement Pattern and Design.

Components of this policy state that:

- ◇ new development within existing urban areas is preferred and should be undertaken so as to avoid or minimise adverse impacts on coastal resources and their values
- ◇ provision of new infrastructure should promote consolidation and separation of urban areas on the coast.

At the request of EPA, the Addendum provided a desktop assessment of 24 embayments along the Whitsunday mainland coast to identify any other sites that might compare favourably to Boathaven Bay from an environmental viewpoint. In summary, most of the sites identified are relatively undisturbed compared to Boathaven Bay. Most of the sites had seagrass beds recorded to differing degrees and others had no records available. The Proponent considered that Boathaven Bay was the most suitable location for a marina development along the Whitsunday mainland coast, i.e. the site was more congruent with the principles of ESD than any other site reviewed in the region.

#### **4.23.2 Environmental Protection Policy (Water) 1997**

EPA has indicated that the POA development is inconsistent with Section 7 of the Environmental Protection Policy (Water) 1997 (EPP (Water)).

EPA considers that “the proposal - in its current format - does not protect the biological integrity of the aquatic ecosystem, as required under Section 7 of the EPP (Water) against the direct and indirect impacts that are likely to occur. Impacts on habitat and aquatic communities would be major on a local scale and potentially significant on a regional scale. No suitable measures were identified that would compensate for such impacts”.

EPA has advised that “in addition to the mangrove and seagrass habitat clearing, ongoing impacts to water quality are likely to exert further pressure on remaining habitat areas and faunal populations in Boathaven Bay and surrounding waters. Maintenance dredging, spoil disposal and boating activities will result in increased turbidity as well as the release of contaminants such as hydrocarbons and metals.

Section 7(2) of the EPP(Water) specifies water quality values to be preserved as follows:

*The qualities are -*

*(a) if the water -*

*(i) is a pristine water - biological integrity of a pristine aquatic ecosystem; or*

*(ii) is not a pristine water - biological integrity of a modified aquatic ecosystem; and*

*(b) suitability for recreational use; and*

*(c) suitability for minimal treatment before supply as drinking water; and*

*(d) suitability for agricultural use; and*

*(e) suitability for industrial use.*

Boathaven Bay has been modified by human activities including urban development in most of the catchment, the presence of live-aboard boats drawn up on the shores of the bay, boat repair activities and the mooring of other boats in the mouth of the bay.

The definition of pristine aquatic ecosystem used in the EPP (Water), is as follows:

*“pristine aquatic ecosystem” means an aquatic ecosystem that has not been, or is not subject to human interference through –*

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- a) releases (whether direct or indirect) into a water forming part of the ecosystem; or  
b) activities in the water's catchment area.

On this basis, Boathaven Bay cannot be viewed as a pristine aquatic ecosystem. Therefore, the water quality values to be preserved in the bay are those consistent with supporting a modified ecosystem. It is therefore appropriate to adopt existing water quality in Boathaven Bay as that which is suitable for maintaining the biological integrity of the ecosystem of Boathaven Bay.

In the SEIS and the Addendum the Proponent states the measures (Water Quality Baseline Monitoring Environmental Management Plan and Dredge Management Plan) proposed to protect water quality and to avoid indirect impacts on adjacent habitats. The Proponent has committed to implement these measures and also to comply with EPA licence conditions.

In addition, the Proponent has indicated that some current stresses on water quality in Boathaven Bay and Pioneer Bay will be reduced. Sewage pump out facilities will be provided for boats, a controlled environment for boat repairs will also be provided. Within Boathaven Bay, gross pollutant traps and sediment basins will be provided on stormwater from and passing through the POA development. Stormwater draining into Boathaven Bay at present does not have these controls.

#### **4.23.3 Building Heights**

The heights of the various buildings within the proposed development range from 2 to 5 floors. The Proponent reduced the height of most buildings by one floor in response to comments raised in submissions on the SEIS and following detailed negotiations with the Whitsunday Shire Council.

Issues raised by submitters commented on the height of the buildings being incompatible with the existing planning scheme and also would impact on views for existing property owners on Coconut Grove and Shute Harbour Road

The density and orientation of buildings on sites E (Harbourfront Residential) and G (Harbourfront Mixed Use and Public Carpark) of the Master Plan have been modified to accommodate specific views from the adjacent Portside and Airlie Beach Hotel developments.

Building heights for the development will be in accordance with those agreed by the Whitsunday Shire Council and presented in Chapter 2.10 of the Addendum to the SEIS.

#### **4.23.4 Blasting**

The Proponent has indicated that it does not anticipate the need for blasting during construction. However, if blasting is required it will be carried out behind sheet piling or banded coffer dams. There will be no blasting in the open sea.

The vibration and noise from blasting may impact on marine animals.

EPA has included a condition that no blasting is to occur in areas that are not separated from tidal waters by steel sheet piling, in Appendix 1, Schedule 2.

### **4.24 EVALUATION OF CONTROLLED ACTIONS**

On 22 June 2001, the Commonwealth Minister for the Environment and Heritage determined that the POA project constituted a controlled action pursuant to Section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Part 3, Division 1, controlling provisions are:

- ◊ sections 12 and 15A (World Heritage);
- ◊ sections 18 and 18A (Listed threatened species and communities); and
- ◊ sections 20 and 20A (Listed migratory species).

Examples of the World Heritage values for the Great Barrier Reef include:

- ◊ coral reef and cays
- ◊ geological evolution of reef structure
- ◊ diverse ecosystems
- ◊ size and morphological diversity
- ◊ diversity of flora and fauna
- ◊ vast extent of reef and island systems
- ◊ variety of landscapes and seascapes
- ◊ species of plants and animals of conservation significance

The POA development does have the potential to impact on values of the Great Barrier Reef World Heritage Area (GBRWHA). Although the marina, itself is not within the GBRWHA, the access channel for the marina extends into the World Heritage area. The potential impact of the project on World Heritage values is addressed in the SEIS (s 9.3.3).

The marina has the potential to increase the number of boats accessing the Great Barrier Reef Marine Park and the GBRWHA. However, it is expected that the majority of boats which will use the marina are boats already accessing the area.

The regulation of the number of boats and passengers able to access the marine park is a matter for GBRMPA. The Authority is responsible for the issuing of permits for commercial boats as well as restricting access for commercial and private boats to certain areas.

Other project impacts which have the potential to adversely affect World Heritage values of the GBRWHA have been addressed in specific sections throughout this Report (refer to Table below).

Issue Raised	Addressed in Report
1. seagrass loss and effect on dugongs	s. 4.7.2
2. boat speeds	s. 4.7.6
3. stormwater run-off	s. 4.9
4. siltation rates	s. 4.9
5. sediment nutrient analysis	s. 4.9
6. hydrodynamic regime of Boathaven Bay	s. 4.11
7. blasting	s. 4.13



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## 5 SUSTAINABLE DEVELOPMENT MEASURES

### 5.1 INTRODUCTION

The Proponent has firmly indicated during the course of the impact assessment process that it would endeavour to avoid or mitigate adverse impacts on the environment. This undertaking was demonstrated in commitments outlined in the formal EIS documents and also in informal communications between the Proponent and the Advisory Agencies.

### 5.2 DRAFT ENVIRONMENTAL MANAGEMENT PLAN

A draft Environmental Management Plan (EMP) has been developed by the Proponent to manage the environmental impacts of the development. The role of the EMP is to ensure:

- ◇ commitments made in the SEIS, Addendum and other correspondence are upheld
- ◇ conditions of this Report and any other permits and approvals are satisfied
- ◇ best practice environmental management is achieved at all stages of the project
- ◇ environmental monitoring is undertaken to confirm the effectiveness of environmental management measures in preventing unacceptable impacts on the environment and to ensure compliance with any permit and approval conditions
- ◇ where unacceptable environmental impacts are detected, ensure that corrective actions are implemented to repair any damage that has occurred and prevent any further unacceptable impacts or non-compliances from occurring.

The Proponent has committed to regularly update the EMP to incorporate changes in environmental management procedures in light of ongoing monitoring results, new techniques, legislation and environmental policies, in consultation with relevant authorities.

### 5.3 STRUCTURE OF THE DRAFT EMP

The Draft EMP comprises two parts which focus on the design/construction, and operational phases of the project and incorporates monitoring activities associated with the development. The two parts of the EMP and associated monitoring requirements incorporate the issues included in the following tables.

<b>DRAFT ENVIRONMENTAL MANAGEMENT PLAN</b>	
<b>Design and Construction Implementation Plans</b>	<b>Operation Implementation Plans</b>
Coastal Processes	Coastal Processes
Erosion, Sediment Control and Acid Sulfate Soils	Acid Sulfate Soils
Water Quality	Water Quality
Coastal and Estuarine Flora and Fauna	Coastal and Estuarine Flora and Fauna
Marine Ecosystems	Marine Ecosystems
Air Quality	Air Quality
Noise and Vibration	Noise and Vibration
Waste Management	Waste Management
Infrastructure and Facilities	Infrastructure and Facilities
Socio-Economics	Socio-Economics
Visual Amenity	Visual Amenity
Cultural Heritage	Cultural Heritage
Blasting	

ENVIRONMENTAL MONITORING REQUIREMENTS	
Stage	Element
Pre-construction	Surface Water Quality
	Ecosystems
	Noise
	Soils and Sediments
Excavation, Land Reclamation and Installation of Civil Works	Discharge from Spoil Disposal Area
	Surface Water Quality
	Ecosystems
	Noise
Channel Dredging	Soils and Sediments
	Surface Water Quality
	Ecosystems
	Noise
Construction of Buildings and Other Facilities	Soils and Sediments
	Surface Water Quality
	Ecosystems
	Noise
Operation of the Marina and Marina Facilities Area	Discharges from Marina Facilities
	Surface Water Quality within Marina
	Ecosystems
	Soils and Sediments

The **EMP – Design and Construction** for POA addresses the:

- ◇ design and pre-construction
- ◇ excavation, land reclamation and installation of civil works
- ◇ capital dredging; and
- ◇ monitoring requirements for design, pre-construction and construction phases.

The **EMP – Operation** for POA is primarily focussed on the:

- ◇ operation of the marina and marina facilities area;
- ◇ maintenance dredging; and
- ◇ monitoring requirements for the operational phase of the project.

EMP's for the construction of buildings and other activities will be prepared by each party responsible for development on the site. This will be a condition of the relevant Development Approvals.

When developed, the EMPs will constitute an environmental planning process designed to aid in the management and monitoring of impacts associated with the construction and operation of POA. Each sub-EMP should be regarded as an operational and reference tool; as such it will be refined or amended, in conjunction with the relevant statutory authorities and should adopt a "best practice environmental management" approach. Such an approach is designed to minimise an activity's environmental harm through cost-effective measures.

In summary, the Draft EMP, and its subsequent revisions will allow management of environmental impacts during the construction and operation of the marina. Furthermore, the monitoring protocol will gauge the extent of the effectiveness of the measures in the EMP.

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## 5.4 ENVIRONMENTAL MANAGEMENT PROGRAM

Construction activities which will occur on site prior to and following dredging, extraction and screening activities associated with the marina and channel construction and reclamation works have the potential to cause harm to the surrounding environment. Not all of these activities are covered in EPA's Environmentally Relevant Activities (ERAs). Consequently, EPA has requested that the Proponent prepare an Environmental Management Program (EMPr) for those activities that are outside of the definitions for ERAs 19 (dredging), 20 (extracting rock or other material) and 22 (screening materials).

An EMPr is a plan of action to improve an enterprise's environmental management performance, by reducing environmental harm and achieving full compliance with the EP Act over time. The EMPr is a management tool provided under the EP Act to protect an enterprise from prosecution for breach of the Act provided certain undertakings are given and met.

The following condition addresses concerns expressed in 5.3 and 5.4 above.

### **Condition 14**

- (a) Appropriate design/construction and operational Environmental Management Plans (EMPs) as outlined in the Supplementary Environmental Impact Statement and Addendum must be finalised in consultation with the Environmental Protection Agency and Whitsunday Shire Council, where relevant, and submitted as part of all applications for development permits for the project. The EMPs are to cover all activities on site prior to the commencement of dredging, extraction and screening activities through to the completion of the marina and reclamation areas, and also include operation of that part of the development. The EMPs are to incorporate monitoring and corrective action requirements.**
- (b) An Environmental Management Program covering all marina and reclamation area construction activities on site, prior to the commencement of and following the completion of dredging, extraction and screening activities, is to be developed in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project.**

### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This condition is designed to ensure the provision of effective management of environmental impacts generated by the marina development through the preparation and implementation of effective Environmental Management Plans and Environmental Management Program.
- To minimise impacts the Proponent must:
  - ◊ finalise and implement design/construction, and operational Environmental Management Plans to the satisfaction of EPA prior to the commencement of any works. EMPs are to incorporate monitoring requirements.
  - ◊ Prepare and submit to EPA for approval, a EMPr for those activities that are outside of ERAs 19, 20 and 21.

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## 6 ONGOING ACTIVITIES

### 6.1 APPROVALS

The proponent is responsible for acquiring all relevant statutory approvals at the appropriate time throughout project development.

From a State perspective, the approvals required for the POA proposal to progress include, but are not limited to, the following:-

#### Environmental Protection Act 1994 / Integrated Planning Act 1997

A development approval for a Material Change of Use (MCU) under the *Integrated Planning Act 1997* (IPA) and the associated licence with development approval under the *Environmental Protection Act 1994* (EP Act) will be required to undertake Environmentally Relevant Activities (ERAs) 19 – Dredging, 20 – Extraction and 22 – Screening for the project. The EPA will be the alternative assessment manager for the development approval (MCU) as the site is outside of the local government area until reclamation is completed and therefore the planning scheme will not apply. The EPA is also the administering authority for the licence with development approval under the EP Act.

The WS Council would be the assessment manager for the devolved ERAs 11 - Crude oil or petroleum product storage, 69 - Boat maintaining or repairing facility and 73 - Marina or seaplane mooring under section 39(2) of the *Environmental Protection Regulation 1998*, for applications relating to the respective lots once reclamation is completed and property boundaries defined. These ERAs will also require development approvals (MCU) under IPA and the associated licence with development approval under the EP Act.

#### Fisheries Act 1994

An approval for a permit to remove protected marine plants under the provisions of section 51(c) of the *Fisheries Act 1994* is required. DPI is the responsible agency.

#### Coastal Protection and Management Act 1995

Amendments to the *Coastal Protection and Management Act 1995* (Coastal Act) now require the assessment of coastal development applications under the integrated development assessment system (IDAS) within IPA. Approvals similar to those previously required through the (now repealed) *Harbours Act 1995*, *Canals Act 1958* and *Beach Protection Act 1968* are assessed against the coastal management criteria of the amended Coastal Act. Consequently, a development approval (operational works) under IPA will be required for items listed under schedule 8, part 1, item 3D of IPA. The EPA is the assessment manager for the development approval (operational works) application.

Furthermore, the proponent will be required to obtain either (i) an allocation of quarry material under section 73 of the Coastal Act or (ii) an approved dredge management plan under section 91 of the Coastal Act prior to the commencement of dredging/extraction of material from within coastal waters. The approval of the allocation/management plan is outside the IDAS process and the EPA is the administering authority.

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Integrated Planning Act 1997

The following WS Council approvals are required:-

- ◊ Preliminary Approval for a Material Change of Use under IPA (once the land is reclaimed and included in Whitsunday Shire Council's Planning Scheme).
- ◊ Reconfiguration of a lot (once the land is reclaimed).

## 6.2 REPORTING

Throughout the EIS process the Proponent has nominated a range of commitments to ameliorate adverse impacts with respect to construction of the Port of Airlie project. These commitments have been made in the EIS documentation, in specific issue correspondence and in meetings with Advisory Agencies. It is considered appropriate for the Proponent to consolidate these commitments into one document.

As design and construction of the project proceeds, reporting of progress in achieving the commitments, conditions and requirements is required. This should be undertaken every six months.

Detailed design of the project has not yet commenced. When this is undertaken there may be changes to the project reviewed in the EIS which would change the anticipated impacts and hence the conditions and requirements of this report and the commitments made in relation to the project by the Proponent. Any changes to the project which have the potential to change its impact on the environment must be reconsidered by the Coordinator-General.

### **Requirement 4**

- (a) A full schedule of all commitments, including those outlined in the SEIS, the Addendum and other correspondence provided to the Department of State Development or Advisory Agencies by the Proponent, is to be provided to the Coordinator-General within 40 working days of the date of issue of this Coordinator-General's Report.**
- (b) A written report must be submitted to the Coordinator-General every 6 months after the issue of this Coordinator-General's Report on the progress of implementation of commitments, conditions and requirements, until all commitments, conditions and requirements have been met or as otherwise agreed.**
- (c) The Coordinator-General is to be notified, immediately, of any material changes to the project as described in the Supplementary Environmental Impact Statement, Addendum and supporting material which have the potential to change the impacts of the project on the physical, socio-economic and business environments.**

### Reasons:

- Section 39(1)(a) of the SDPWO Act provides for the Coordinator-General's Report to state conditions which the assessment manager(s) for the IPA development approval application(s) must attach to the development approval(s), if granted.
- This requirement is designed to ensure that commitments, conditions and requirements with respect to the marina development are implemented and that where the project changes from that studied for the EIS, impacts are reviewed.

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- To support effective environmental management the Proponent must:
    - ◊ provide the Coordinator-General with an integrated document outlining the project's commitments, conditions and requirements, and when they will be implemented.
    - ◊ biannually report success in implementing the commitments, conditions and requirements to provide information on progression of the project and to assist in evaluating the actual impact of the marina development on the receiving environment.
    - ◊ immediately notify the Coordinator-General of any material changes regarding the project. This will maintain the policy of transparency and disclosure created during the EIS process and allow the flexibility to amend countermeasures to suit the changed circumstances.

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## 7 CONCLUSION

Having regard to the documentation and information provided, it is considered that the EIS process has generally satisfied the requirements of the Queensland Government for impact assessment in accordance with Part 4 of the *State Development and Public Works Organisation Act 1971* and Part 5 of the *State Development and Public Works Organisation Regulation 1999*. The process has provided sufficient information to the three levels of government, and the community, to allow an informed evaluation of potential environmental impacts which could be attributed to the Port of Airlie Marina Development. Careful management of key pre-construction, construction and operational activities should ensure that any environmental impacts are reduced.

The influence of construction activity associated with the Port of Airlie Marina Development project and the subsequent environmental performance attributable to the development will be monitored by a variety of public agencies, especially the Environmental Protection Agency, Department of Primary Industries, Department of Natural Resources and Mines, Department of Main Roads, Department of Transport, Department of Housing, Department of Local Government and Planning, Great Barrier Reef Marine Park Authority, and Whitsunday Shire Council.

On the basis that the key impacts have been identified, measures to reduce these impacts developed and a variety of monitoring programs designed for the proposal, it is appropriate to support the Proponent's intention to proceed with the project.

Therefore I recommend that the approval for the project, as described in the SEIS and Addendum, and summarised in Section 2 of this report, must be a preliminary approval only and that the conditions and requirements in *Appendix 1 – Conditions and Requirements*, must be attached to any development approval by the Assessment Manager(s).

Windward AB Pty Ltd, the Whitsunday Sailing Club and their agents, lessees, successors and assigns, as the case may be, must implement the conditions and requirements in this Report (Appendix 1) and all commitments presented in the SEIS and Addendum and consequent discussions. In the event of any inconsistencies, the conditions and requirements of this Report prevail.

Copies of this Report will be given to:

- the Proponent (Windward AB Pty Ltd and Whitsunday Sailing Club), pursuant to Section 35(5)(a) of the *State Development and Public Works Organisation Act 1971*. This Report should then comprise part of the Proponent's applications for any development approvals for a Material Change of Use pursuant to the *Integrated Planning Act 1997*;
- Whitsunday Shire Council as future Assessment Manager, pursuant to Section 40 of the *State Development and Public Works Organisation Act 1971*.
- EPA as the alternative assessment manager for development approval (Material Change of Use) under the *Integrated Planning Act 1997*, the associated licence with development approval under the *Environmental Protection Act 1994* (for ERAs), and development approval (Operational Works) for coastal works.
- The Commonwealth Minister for the Environment and Heritage pursuant to Section 17(2) of the *State Development and Public Works Organisation Regulation* to enable a decision to be made about the controlled actions for this project pursuant to Section 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

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A copy of this Report will also be forwarded to Advisory Agencies and made publicly available on the Department of State Development's web site.



**Denis Cook**  
**Deputy Coordinator-General**

Date 12/11/04



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## APPENDIX 1 - CONDITIONS AND REQUIREMENTS

### Schedule 1

Conditions to which any approvals given under the Fisheries Act 1994 for the project for which the Department of Primary Industries is the responsible Agency, are to be subject.

#### Condition 1

- (a) A permit must be obtained to remove protected marine plants, including saltcouch, mangroves and seagrass, under section 51 of the *Fisheries Act 1994*. The permit, which is to include mitigation measures, is to be obtained prior to construction commencing.

Conditions to which any development approvals given under the Integrated Planning Act 1997 for the project for which the Environmental Protection Agency is Assessment Manager, are to be subject.

#### Condition 1

- (b) A monitoring program for seagrass adjacent to the development site must be prepared in consultation with the Department of Primary Industries and submitted as part of all applications for development permits for the project. The monitoring program is to be developed in accordance with the Department of Primary Industries policy *FHMOP 001 (2002) Management and Protection of Marine Plants* and is to address, in accordance with *FHMOP 005 (2002) – Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss*, unacceptable impacts on seagrass beds and contingency measures for responding should those impacts be observed. Monitoring under the program is to be implemented as soon as possible prior to the commencement of construction and continue for a minimum of three years after construction of earthworks.

#### Condition 2

- (a) A protected species management plan must be prepared in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project. The plan is to include:
- procedures for the observation and recording of dugong and turtle sightings in the area surrounding the site prior to and during dredging and pile driving activities, and the cessation of these works while dugongs and turtles are within the “exclusion zone” (i.e. within 150 metres of dredging or pile driving activities)
  - procedures for cessation of any works while migratory birds are within the “construction activity area” (i.e. within 25 metres of any construction activity) and minimisation of illumination of the intertidal area to the east of the site.
  - procedures for the temporary cessation of any works in the event that a species of conservation significance, which has not been identified during studies undertaken since 1985, is found to occur in the area.
- (b) Dredging and pile driving for project construction must not be carried out whilst dugongs and turtles are within the exclusion zone.
- (c) Construction must not be carried out whilst migratory birds are within the construction activity area.

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- (d) If significant Acid Sulfate Soil is encountered during preconstruction surveys, a survey of the Campbell's Creek area is to be undertaken by the proponent, prior to construction commencing, to determine the presence of any water mice. The survey is to be provided to the Environmental Protection Agency for review.
  - (e) If water mice are detected, a targeted monitoring and management program is to be established, in consultation with the Environmental Protection Agency, prior to construction commencing, to ensure that disturbance of Acid Sulfate Soil and discharge of water from the site does not impact adversely on the species.

#### *Condition 3*

- (a) Boat speed signs are to be erected and maintained within the marina and access channel area by the proponent as directed by Maritime Safety Queensland (Department of Transport) in accordance with s206A of the *Transport Operations (Marine Safety) Act 1994*.
- (b) Educational signs explaining the importance of adhering to boat speed limits within the marina area and access channel are to be erected and maintained by the proponent. The specific number and location of, and information to be displayed on, the signs must be determined in consultation with Maritime Safety Queensland (Department of Transport) and the Environmental Protection Agency.

#### *Condition 4*

- (a) A Dredge Management Plan must be prepared in consultation with the Environmental Protection Agency, Department of Primary Industries and the Great Barrier Reef Marine Park Authority and be submitted as part of all applications by the proponent for development permits for the project. The Plan is to cover dredging for construction and maintenance, and disposal of dredge material especially contaminated sediments.
- (b) Arrangements to ensure that construction does not re-suspend sediments, particularly those contaminated with tributyl tin, into the water column or any discharge waters must be included in the Dredge Management Plan.
- (c) Construction channel dredging should take place between March and August in any year to minimise impacts on seagrasses and corals and to avoid the cyclone season.
- (d) As a requirement of tenure designation under the *Land Act 1994*, following reclamation works, the proposed dredge spoil disposal area marked 'R' on plan 'SK-031 by ML Design' as shown on page 2-17 of the Port of Airlie Addendum to the Supplementary EIS (April 2003) is to be maintained as a 'dredge spoil rehandling area' which is defined as "*a purpose built area into which spoil from maintenance dredging of the adjoining marina and associated access channel shall be stored until it is in a consolidated form that enables transportation to a facility that can lawfully accept such material*".
- (e) The dredge spoil disposal area must be stringently managed to ensure that adjacent fish habitats, including marine plant and coral communities are not adversely or permanently impacted. Management of this area is to be an integral element of the Dredge Management Plan.
- (f) Water quality baseline monitoring of turbidity, sediment pollutant concentrations and other parameters, within Boathaven Bay, Pioneer Bay and Campbell's Creek estuary, is to be undertaken prior to the commencement of construction.

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- (g) The findings of the water quality monitoring program are to be used to determine water quality parameters for the Dredge Management Plan and trigger levels for each parameter above which work practices will need to be reviewed or suspended.

*Condition 5*

- (a) A detailed design of stormwater systems including an assessment of the stormwater runoff volume and any changes in quantity or quality of this runoff, as a result of the development, is to be prepared.
- (b) The findings of the stormwater runoff assessment are to be submitted to the Environmental Protection Agency, prior to submission of all applications for development permits for the project for the Environmental Protection Agency's review and comment of any further action which may be required by the development. The findings and any comments by the Environmental Protection Agency are to be submitted as part of all applications for development permits for the project.
- (c) Best practice environmental management technology sediment and litter control devices must be included on stormwater systems within the development in consultation with the Environmental Protection Agency.

*Condition 6*

- (a) Prior to the commencement of any site works, an Acid Sulfate Soil (ASS) investigation must be undertaken for all land, seabed, soil and sediment at or below 5m Australian Height Datum (AHD) and where:
- excavation is proposed; or
  - filling of land involving more than 500m<sup>3</sup> of material at greater than an average depth of 0.5m is proposed.
- (b) The ASS investigation must:
- be in accordance with the methods prescribed in the *Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils in Queensland* (Ahern et al. 1998) and the *Queensland Government Instructions for the Treatment and Management of Acid Sulfate Soils 2001*. Soil and/or sediment profiles should be mapped at a suitable scale and described according to the *Australian Soil and Land Survey Field Handbook* (McDonald et al. 1990) and *Australian Soil Classification* (Isbell. 1996).
  - be conducted by a certified professional soil scientist.
  - be submitted to the Department of Natural Resources and Mines prior to any proposed works commencing; and
  - where the investigation indicates that construction activity may be detrimental to the marine environment, serve as the basis for an ASS Management Plan which is to be prepared in accordance with the guidelines and instructions above and the draft Environmental Management Plan outlined in the Supplementary Environmental Impact Statement, and be implemented in a manner acceptable to the Department of Natural Resources and Mines.
- (c) In the event that sampling reveals ASS to be present, a background groundwater monitoring program must be undertaken for areas adjoining the proposed development in accordance with the requirements of the Environmental Protection Agency prior to commencement of any works within the development lease area.

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### Condition 7

- (a) Hydrodynamic modelling of Boathaven Bay is to be undertaken in the detailed design stage prior to construction commencing, to ascertain impacts on the bay's hydrodynamic regime. The detailed hydrodynamic modelling is to be undertaken in accordance with the requirements of the Environmental Protection Agency and will include:
- assessment of storm surge level;
  - assessment of sedimentation rates;
  - dredge plume modelling; and
  - assessment of erosion processes on the artificial beach.
- (b) The findings of hydrodynamic modelling must be submitted as part of all applications for development permits for the project.
- (c) Management responses/actions considered relevant by the Environmental Protection Agency and Department of Primary Industries must be included in the Dredge Management Plan.

### Condition 8

With respect to the artificial beach, which is to be constructed as part of the project, the following information is to be submitted to Whitsunday Shire Council and the Environmental Protection Agency for its comment prior to any application for a development permit being lodged:-

- details of material from which the beach is to be constructed;
- volume of the material required for the beach;
- dimensions of the beach (including width);
- strategy for managing midges;
- copy of Agreement for funding and carrying out re-nourishment and maintenance works.

The details and Council's comments, if any, in relation to those details are to be submitted as part of all applications for development permits for the project.

### Condition 9

A Construction Noise Management Plan is to be prepared in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project. The plan is to include consultation with affected members of the community and measures to minimise impacts on these individuals.

Conditions to which any development approvals given under the Integrated Planning Act 1997 for the project for which the Environmental Protection Agency or Whitsunday Shire Council is Assessment Manager, are to be subject.

### Condition 10

- (a) A Traffic Management Plan (TMP) for each of the proposed development stages must be prepared by the proponent in consultation with the Department of Main Roads and Whitsunday Shire Council and submitted as part of all applications for development permits for the project, to give effect to s3.5.32(2) of the *Integrated Planning Act 1997*. The final TMP must consider impacts 10 years beyond the last development stage. The TMP shall address matters which include:

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- public parking to be provided on site;
  - traffic to be generated by the proposed development and the impact by the proposed development on the external road network;
  - proposed ingress and egress point to the site;
  - any access and intersection treatment required due to development traffic at the Coconut Grove/Shute Harbour Road and Hermitage Drive/Shute Harbour Road intersection (and any other intersection that may be affected);
- (b) An infrastructure agreement with the Department of Main Roads, is required, prior to the commencement of construction, to implement any road impact mitigation measures identified in the TMP, to give effect to s42(4) of the *Transport Infrastructure Act 1994*.
- (c) Any access and intersection treatment identified by the TMP to be required due to development traffic at the Coconut Grove/Shute Harbour Road, Hermitage Drive/Shute Harbour Road intersection, the mid-block access between Coconut Grove and Hermitage Drive and any other intersection that may be affected by the development must be carried out by the proponent at the proponent's cost.
- (d) All intersection and access treatments must be designed to accommodate pedestrians and cyclists.
- (e) Any drainage works on Shute Harbour Road required to ameliorate the impact of drainage from the site must be funded by the Proponent.
- (f) Consultation is required with the Department of Main Roads and Whitsunday Shire Council for the preferred traffic control of crossings on State-controlled and local roads respectively. For State-controlled roads (i.e. Shute Harbour Road) the treatment of pedestrian crossings is to be in accordance with the Department of Main Roads *Manual of Uniform Traffic Control Devices*. Detailed design must have regard to specific pedestrian user groups such as children, the aged and people with disability.
- (g) All roadworks and associated works are to be located to accommodate the upgrading of Shute Harbour Road to four lanes.
- (h) All works within the road reserve require prior approval from the Department of Main Roads and must be designed and constructed by Department of Main Roads pre-qualified consultants and contractors, and meet Department of Main Roads standards and specifications.
- (i) Land, determined in accordance with Department of Main Roads design guidelines, is to be set aside as road reserve for the future four lane upgrading of Shute Harbour Road.
- (j) Further traffic modelling, in accordance with the requirements of the Department of Main Roads' *Guidelines for Assessment of Road Impacts of Development Proposals (2001)* must be undertaken during the detailed design stage prior to construction commencing. This will include sensitivity testing in relation to changes in modal splits, particularly increased car trips to the site.

#### *Condition 11*

- (a) A three-lane public boat ramp with a queuing pontoon must be provided. The queuing pontoon should be at least 20 metres long with a T or L head.
- (b) At least 45 car/trailer parking spaces adjoining the boat ramp and overflow parking for at least 25 car/trailers in close proximity to the boat ramp are to be provided.
- (c) The boat ramp is to be designed and constructed in accordance with Department of Transport's standard Drawings Misc-36-1-18 and Misc-36-1-8.

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### *Condition 12*

- (a) Further detailed analysis of peak-hour long-distance and local bus use of the public transport interchange, including a comparison of current and predicted future number, size and frequency of vehicles, is to be undertaken during the detailed design stage, to ensure that the bus terminal capacity takes potential future growth into consideration.
- (b) The findings of the above analysis and any recommendations for further action are to be provided to the Rockhampton Office of the Department of Transport for review. Department of Transport recommendations, together with the analysis are to be submitted as part of all applications for development permits for the project.
- (c) The public transport interchange is to be constructed during the initial stage of the planned development sequence.

### *Condition 13*

The following indicative standard conditions are to be applied by Whitsunday Shire Council to the preliminary approval:

#### Clearing, Landscaping and Fencing

Any vegetation removed shall be disposed of to the requirements of the Whitsunday Shire Council. Transplanting, chipping or removal from site are the preferred solutions.

Landscaping shall be undertaken in accordance with Whitsunday Shire Council's codes and policies applicable at the time of development and shall be maintained thereafter to the satisfaction of Council.

#### Building

Prior to issue of any Development Permit, certificates of structural and geotechnical compliance with Australian standards shall be provided by both Structural and Geotechnical Engineers. All work shall be supervised by the Structural and Geotechnical Engineers and a Certificate of Completion provided to Whitsunday Shire Council prior to occupancy of any buildings.

#### Water Reticulation

The development shall be connected to Whitsunday Shire Council's water network, to the requirements of Council, prior to commencement of the use.

All internal and external water reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's codes, policies, standards and specifications, applicable at the time and where relevant, to the Council's requirements.

#### Sewer Reticulation

The development shall be connected to Whitsunday Shire Council's sewerage, to the requirements of Council, network prior to commencement of use.

All internal and external sewerage reticulation, as a result of the development, shall be designed, constructed and maintained in accordance with Whitsunday Shire Council's

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codes, policies, standards and specifications, applicable at the time and where relevant to the Council requirements.

### Driveways and Parking

All internal accesses, internal driveways, circulation roads, commercial vehicle provisions, car parking and manoeuvring areas shall be designed in accordance with AS 2890 and comprise a sealed pavement to Whitsunday Shire Council's requirements.

Turnarounds and intersections shall be provided to cater for garbage collection trucks and tourist buses to the requirements of Whitsunday Shire Council.

### Stormwater and Flooding

All stormwater drainage works are to be designed and constructed in accordance with the Queensland Urban Drainage Manual and Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

### Road Works

All roads, to be dedicated as public road within the development site, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

All roadworks external to the site, required to be undertaken as a result of the development, are to be designed and constructed in accordance with Whitsunday Shire Council's codes, policies, standards and specifications applicable at the time of development.

### Electricity and telecommunications

The proposed development shall be connected to electricity and telecommunications to the requirements of the relevant authority.

### Developer Contributions

Contribution towards water supply headworks and sewerage reticulation headworks and any other Whitsunday Shire Council infrastructure able to be lawfully imposed by Council, shall be paid to Council prior to commencement of the use on site. The contributions shall be paid in accordance with the rates applicable at the date of payment.

### Miscellaneous

Any alterations, relocations, or upgrading work necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from or in connection with the development, or roads and drainage necessary as a result of the development, shall be at full cost to the developer.

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#### *Condition 14*

- (a) Appropriate design/construction and operational Environmental Management Plans (EMPs) as outlined in the Supplementary Environmental Impact Statement and Addendum must be finalised in consultation with the Environmental Protection Agency and Whitsunday Shire Council, where relevant, and submitted as part of all applications for development permits for the project. The EMPs are to cover all activities on site prior to the commencement of dredging, extraction and screening activities through to the completion of the marina and reclamation areas, and also include operation of that part of the development. The EMPs are to incorporate monitoring and corrective action requirements.
- (b) An Environmental Management Program covering all marina and reclamation area construction activities on site, prior to the commencement of and following the completion of dredging, extraction and screening activities, is to be developed in consultation with the Environmental Protection Agency and submitted as part of all applications for development permits for the project.

#### *Coordinator-General's requirements*

##### *Requirement 1*

An Industry Participation Plan is to be prepared in accordance with the requirements of the Queensland Government's Local Industry Policy, March 2001 and is to be submitted as part of all applications for development permits for the project. The Plan is to be prepared in consultation with the Industry Capability Network (Queensland).

##### *Requirement 2*

- (a) Following the signing of any construction contract for development on the site, the proponent must submit quarterly reports to the Department of Housing providing details of workforce numbers, including estimates of recruitment from local sources and a breakdown of project accommodation requirements for accompanied and unaccompanied non-local workers.
- (b) Following the signing of any construction contract for development on the site, the proponent must provide the Department of Housing with a copy of the contractor's plans for accommodation of accompanied and unaccompanied non-local workers and information about procedures for implementation of those plans.
- (c) The proponent and its contractors must liaise with the Department of Housing to identify appropriate data on the projects impacts on the availability of rental accommodation.

##### *Requirement 3*

- (a) The nominated Traditional Owner representatives must be provided with an opportunity to be involved in any monitoring of land and sea cultural heritage during critical parts of the construction phase where coastal areas are first disturbed.
- (b) If any suspected evidence of cultural heritage remains is detected in surface or sub-surface deposits during any stage of the project, activities at the site must be halted and the Proponent must make contact with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and Traditional Owner representatives (where indigenous cultural heritage material is suspected). If finds of cultural heritage significance are made, an appropriate management and mitigation strategy is to be



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determined in consultation with the Regional Manager, Cultural Heritage Branch, Environmental Protection Agency and the Traditional Owners (where indigenous cultural heritage material is found).

- (c) If requested by the Traditional Owners, information on cultural heritage of the Whitsunday area is to be incorporated into any interpretive material provided as part of the Port of Airlie development.
- (d) Requirements (a) to (c) above are to be included in the Environmental Management Plans (EMPs) for design, construction and operation. The EMPs should also address any development-related negative social impacts to Aboriginal and Torres Strait Islander people in the area, which are identified by the Department of Aboriginal and Torres Strait Islander Policy.

*Requirement 4*

- (a) A full schedule of all commitments, including those outlined in the SEIS, the Addendum and other correspondence provided to the Department of State Development or Advisory Agencies by the Proponent, is to be provided to the Coordinator-General within 40 working days of the date of issue of this Coordinator-General's Report.
- (b) A written report must be submitted to the Coordinator-General every 6 months after the issue of this Coordinator-General's Report on the progress of implementation of commitments, conditions and requirements, until all commitments, conditions and requirements have been met or as otherwise agreed.
- (c) The Coordinator-General is to be notified, immediately, of any material changes to the project as described in the Supplementary Environmental Impact Statement, Addendum and supporting material which have the potential to change the impacts of the project on the physical, socio-economic and business environments.

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## Schedule 2

### Conditions to be attached to a Development Approval for the commencement of Environmentally Relevant Activities.

#### Project Description:

Construction of an artificial waterway and land forming activities associated with the development of a marina and tourism development adjacent to the Airlie Beach Township.

The commencement of ERAs for the proposal will require a development approval under the IPA and the associated licence with development approval under the *Environmental Protection Act 1994*. The EPA would be the assessment manager for the works where the Local Government Authority does not have any concerns or where the site is completely outside of the local planning scheme (ie. the construction ERAs). Under section 39(2) of the *Environmental Protection Regulation 1998* (EPRGs), the Local Government Authority will be the assessment manager for the devolved ERAs 11, 69 and 73.

#### Type of development:

The start of a new use of the premises

#### Decision on development application:

Preliminary Approval

#### Type of ERA(s):

Any approval will relate to the following environmentally relevant activities (ERA(s)):

ERA	DISCRIPTION
• 19(c)	Dredge material- dredging material from the bed of any waters (other than dredging by a port authority of material for which a royalty or similar charge is not payable) using plant or equipment having a design capacity of 100 000 t or more a year
• 20(c)	Extracting rock or other material - extracting rock (other than rock mined in block or slab form for building purposes), sand (other than foundry sand), clay (other than clay used for its ceramic properties, kaolin or bentonite), gravel, loam or other material (other than gravel, loam or other material under a mining tenement or an authority, lease, licence or permit mentioned in item 21C or 21D) from a pit or quarry using plant or equipment having a design capacity of - (c) 100 000 t or more a year
• 22(c)	Screening etc. materials - screening, washing, crushing, grinding, milling, sizing or separating material extracted from the earth (other than under a mining tenement or an authority, lease, licence or permit mentioned in item 21C or 21D) or by dredging using plant or equipment having a design capacity of 100 000 t or more a year

#### Location

Described as located below the high water mark in the western section of Boathaven Bay (also known as Muddy Bay). Shute Harbour Road bounds the site to the southeast, Coconut Grove Road and Airlie Headland to the west.

#### Reasons for including condition(s)

The conditions in this document are designed to control and limit potential impacts on the land, surface and ground waters, air environment and ecological systems from contaminants that may result from the above environmentally relevant activities. They are consistent with information provided in the Supplementary Environmental Impact Statement and the Addendum Report on the Supplementary Environmental Impact Statement.

### CONDITIONS

These conditions do not remove the need for the Proponent to obtain approvals that may be required under other legislation administered by the Environmental Protection Agency. Approvals or licenses for specific activities will be required under the *Environmental Protection Act 1994* and *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*.

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## Schedules

- Schedule 1A – Activity
- Schedule 1B – Air
- Schedule 1C – Water
- Schedule 1D – Noise
- Schedule 1E – Waste
- Schedule 1F – Land
- Schedule 1G – Community
- Schedule 1H – Definitions
- Schedule 1I – Maps / Plans

## SCHEDULE 1A - ACTIVITY

### Prevent and /or minimise likelihood of environmental harm

- (A1-1) In carrying out the environmentally relevant activities, the holder of the authority must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity (ERA), that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this approval.

*NOTE: This approval authorises the ERA. It does not authorise environmental harm unless a condition contained within this approval explicitly authorises that harm. Where there is no condition or the approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.*

### Maintenance of measures, plant and equipment

- (1A-2) The holder must:
- ◇ install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
  - ◇ maintain such measures, plant and equipment in a proper and efficient condition; and
  - ◇ operate such measures, plant and equipment in a proper and efficient manner.

### Records

- (1A-3) Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.

### Dredging

- (1A-4) The only form of dredging, extraction or screening to be carried out is that associated with the construction of the Port of Airlie Marina and access channel.
- (1A-5) The dredging, extraction or screening activities and any disturbance to flora and fauna (both aquatic and terrestrial), rock bars or riffle areas that create natural pools or sand, gravel and clay in the bed of the waters must only be carried out in the site marked in Schedule 1I of this document.

### Integrated Environmental Management System

- (1A-6) Prior to the commencement of any activities, the holder of this approval must:
- ◇ develop an Integrated Environmental Management System (IEMS) which provides for the effective management by the holder of the actual and potential environmental impacts resulting from the carrying out of the activities; and
  - ◇ submit the IEMS to the Administering Authority for comment within six (6) months of the date of this approval and have due regard to any comments made by the Administering Authority on the management plan
  - ◇ implement and maintain the IEMS from the commencement of carrying out the activities.
- (1A-7) The IEMS must provide for at least the following functions:
- (a) Training staff in the awareness of environmental issues related to carrying out the activities, which must include at least:

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- (b) The environmental policy of the holder, so that all persons that carry out the activities are aware of all relevant commitments to environmental management (including detailed EMPs that identify the actual and potential release of **all** contaminants and what actions that will be taken to prevent the likelihood of environmental harm. The EMPs must detail the monitoring programs, any monitoring data and provide for the review and “continual improvement” in the overall environmental performance of the site-based activities); and
  - (c) Any relevant environmental objectives and targets, so that all staff are aware of the relevant performance objectives and can work towards these; and
  - (d) Control procedures to be implemented for routine operations for day to day activities to minimise likelihood of environmental harm, however occasioned or caused; and
  - (e) Contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and hazards including corrective responses to prevent and mitigate environmental harm (including any necessary site rehabilitation); and
  - (f) Organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to manage environmental issues effectively; and
  - (g) Effective communication to ensure two-way communication on environmental matters between operational staff and higher management;
  - (h) Their obligations in respect of monitoring, notification and record keeping obligations under the IEMS and relevant environmental authorities and/or development approvals; and
  - (i) Monitoring of the release of contaminants into the environment including procedures, methods, record keeping and notification of results;
  - (j) Conducting assessment of the environmental impact of any release of contaminants into the environment;
  - (k) Waste prevention, treatment and disposal; and
  - (l) A program for continuous improvement.

#### **Acid Sulfate Soils**

- (1A-8) Any soils (regardless of texture) disturbed during works associated with the development that have an existing plus potential acidity of equal to or greater than the action criteria of 18 moles  $H^+$  per tonne (oven-dry basis) (or equivalent 0.03%S oxidisable sulfur) must be treated or managed as Acid Sulfate Soils for the purpose of this development approval.
- (1A-9) Prior to the commencement of any works on site, the holder of this development approval must develop an Acid Sulfate Soil management plan for all Acid Sulfate Soils that may be directly or indirectly disturbed by activities at the site. The management plan must identify the actual and potential release of **all** contaminants associated with the disturbance of any Acid Sulfate Soils, their environmental impacts and what actions that are proposed to prevent the likelihood of environmental harm. The management plan must also detail a proposed monitoring program that addresses the release of contaminants and provides for the review and “continual improvement” in the overall environmental performance of the activities associated with the management of the Acid Sulfate Soils.
- (1A-10) The Acid Sulfate Soil management plan (outlined in condition 1A-9) must be conducted and prepared by an experience and appropriately qualified person such as a Certified Professional Soil Scientist.
- (1A-11) The holder of this development approval must submit the Acid Sulfate Soil management plan (outlined in condition 1A-9) to the Environmental Protection Agency, the Department of Natural Resources and Mines and the Queensland Fisheries Service at least 28 days prior to the commencement of any works on site.
- (1A-12) If the Environmental Protection Agency gives to the holder of the development approval any comment on the Acid Sulfate Soil management plan (outlined in condition 1A-9) within 21 days of receiving the documents, the development approval holder must have due regard to those comments when conducting the disturbance, treatment and management of any Acid Sulfate Soils.
- (1A-13) Acid Sulfate Soils that have been drained, disturbed or excavated must only be stored and treated in areas that are designed to contain and collect all contaminants and prevent the contamination of surface and ground waters.
- (1A-14) Only material confirmed to be below the action criteria of existing plus potential acidity of equal to or greater 18 moles  $H^+$  per tonne (oven-dry basis) (or equivalent 0.03%S oxidisable sulfur)

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may be removed from the Acid Sulfate Soils treatment areas, or treated as no longer being Acid Sulfate Soils for the purposes of this document.

- (1A-15) Acid Sulfate Soils must not be used in the construction of bunds and other water diversion/retention devices.
- (1A-16) Bunding, diversion drains and contaminated water treatment impoundments must be used to contain surface run-off from all Acid Sulfate Soils storage and treatment areas.
- (1A-17) The surface area of Acid Sulfate Soils exposed to oxidising conditions and the time exposed must be minimised to the greatest extent possible. An exception is during treatment when Acid Sulfate Soils may be deliberately spread out thinly on a lime pad for drying prior to immediate and complete treatment with neutralising agents (e.g. lime).
- (1A-18) The only Acid Sulfate Soil management technique to be used is the neutralisation of Acid Sulfate Soils in suitably constructed Acid Sulfate Soil treatment areas that incorporate perimeter bunds, leachate collection drains/dams and an acid resistant and impermeable base.
- (1A-19) If there is the likelihood that neutralisation treatment will not be effective for the soil type/s at the site (for example heavy clays or muds that are difficult to mix), a small scale trial to demonstrate that the proposal is practicable must be performed prior to large scale neutralising treatment of the Acid Sulfate Soils.
- (1A-20) Neutralisation of Acid Sulfate Soils sourced acid using seawater is not permitted.
- (1A-21) Surface applications of neutralising agent must be applied to the treatment area/s at a rate capable of neutralising all acid waters that might infiltrate through Acid Sulfate Soils, prior to placing Acid Sulfate Soils in the treatment areas.
- (1A-22) A lime pad must always be pre-positioned prior to spreading soils for drying.
- (1A-23) A sufficient quantity of a finely ground neutralising agent must be thoroughly mixed through the Acid Sulfate Soils during neutralising treatment to:
- i.) treat total sulfidic acidity (TSA) and total actual acidity (TAA); (eg. oxidisable sulfur % S + TAA in equivalent units of % S contained in the soil); and
  - ii.) additional neutralising agent must be added to provide a safety factor to compensate for impurities in the neutralising agent, non homogenous mixing and its solubility (or lack thereof). A minimum safety factor providing the equivalent neutralising capacity to the use of 1.5 times fine pure agricultural lime is required.
- (1A-24) Verification sampling at a frequency of not less than 1 sample per 150m<sup>3</sup> of soil treated must be implemented to demonstrate (via validated analytical techniques e.g. POCAS) that sufficient neutralising agent has been applied to treat Acid Sulfate Soils to prevent any acidification or leaching of metals.
- (1A-25) Further neutralising treatment (including a further round of verification testing) must be applied to any Acid Sulfate Soils tested under condition 1A-24 and where the soil does not comply with the action criteria of existing plus potential acidity of equal to or greater 18 moles H<sup>+</sup> per tonne (oven-dry basis) (or equivalent 0.03%S oxidisable sulfur) and a soil pH >5.5.
- (1A-26) A spatial tracking system for soil lots must be implemented to demonstrate that verification testing has been performed as required. This must entail (as a minimum) being able to identify where each lot of soil tested has been located so that it can be correlated with laboratory analysis results to allow further treatment to be applied if necessary. This system must be documented, and the documents retained (including receipts, dockets or other records showing all acquisitions of neutralising agents along with records of how and where this neutralising agent was used on site).
- (1A-27) Neutralising agents must be stored under conditions that will prevent the deterioration of their effectiveness.

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- (1A-28) Neutralising agents used on the site (for example along drainage lines and at the base of treatment areas) must be replenished and or replaced regularly to remain effective against loss by wind or water erosion.
- (1A-29) Infiltration of surface water (rain and drainage) passing through Acid Sulfate Soils to groundwater must be prevented.
- (1A-30) Acid Sulfate Soil treatment areas must not be on lands below Highest Astronomical Tide unless inclosed by acid resistant barrier that is at least 1.0 metres greater in height than the level of Highest Astronomical Tide.
- (1A-31) The soil must be managed to achieve a consistency that will allow for thorough mixing. This may entail drying (with associated management of any acid and other contaminants resulting) and mechanical turning and breaking up of the soil.
- (1A-32) Drying of Acid Sulfate Soils must not be undertaken during foreseeable wet weather.
- (1A-33) Acid Sulfate Soils must only be spread (on a lime pad) in treatment or storage areas to a depth of 20 to 30cm. Additional layers of soil must not be applied until verification testing has shown that further treatment of the soil is not required. The basal surface or 'treatment pad' must be limed before receiving any untreated material.
- (1A-34) Activities that result in the release, or accumulation and potential future release, of acid from the oxidation of undisturbed PASS must not be undertaken.
- (1A-35) Acid resistant precast structures for engineering structures that will ultimately be submerged (eg. revetments, weirs, etc) must be used to minimise the period of dewatering required for their installation where they are available.
- (1A-36) The holder of this development approval must prevent any lowering of the permanent groundwater table height in areas directly adjoining development site.
- (1A-37) Excavation must be staged to ensure sufficient drying and mixing time can be achieved with the treatment areas available.
- (1A-38) Staging of excavations must ensure that adequate time is available to obtain the results of verification testing before placing further layers of soil in treatment areas. The location and total area required for treatment &/or storage of excavated material must be defined prior to commencement of excavation works.
- (1A-39) Contaminants must only be released to waters from Acid Sulfate Soil treatment areas at designated release points and in compliance with the release limits listed in Schedule 1C - Table 1. All determinations of the quality of contaminants released must be:
- i.) performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and
  - ii.) made in accordance with methods prescribed in the Environment Protection Agency Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent additions or supplements to that document as such become available.
- (1A-40) The holder of this development approval must conduct and keep records of contaminant releases to waters from any designated release points associated with the Acid Sulfate Soil treatment areas, frequency, and for the parameters specified in Schedule 1C - Table 1 throughout the duration of the period of potential impact, with additional monitoring during periods that may represent higher risk of impact. The Cl:SO<sub>4</sub> ratio for each affected water must be calculated. (*Note: This data should regularly be graphed against time to allow a quick visual check to pick up any trends or events in a timely manner*).
- (1A-41) Sufficient groundwater monitoring must be implemented and documented to demonstrate that the permanent groundwater table height has not been lowered during the duration of works if the height of the permanent groundwater table might reasonably be expected to be lowered by activities that will be undertaken; structures that will be installed; or should management strategies fail.

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(1A-42) Provide a financial assurance in the amount and form required by the Environmental Protection Agency prior to the commencement of activities proposed under this development approval.

(1A-43) The financial assurance is to remain in force until the Environmental Protection Agency is satisfied that no claim on the assurance is likely.

**Blasting**

(1A-44) No blasting is to occur in areas that are not separated from tidal waters by steel sheet piling.

**END OF CONDITIONS FOR SCHEDULE 1A**

**SCHEDULE 1B - AIR**

**Nuisance**

(1B-1) The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any odour sensitive place.

**Dust nuisance**

(1B-2) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.

(1B-3) Exceeding any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition B2-1.

- ◇ Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; or
- ◇ A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre ( $\mu\text{m}$ ) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the site, when monitored in accordance with: Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'; or any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

(1B-4) When requested by the Administering Authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:

- ◇ for a complaint alleging dust nuisance, dust deposition; and
- ◇ for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre ( $\mu\text{m}$ ) (PM10) suspended in the atmosphere over a 24hr averaging time.

(1B-5) If the dust cannot be satisfactorily suppressed, dust generating construction activities will cease until climatic conditions allow recommencement of activities without causing dust nuisance.

**END OF CONDITIONS FOR SCHEDULE 1B**

**SCHEDULE 1C - WATER**

(1C-1) Contaminants must only be released to waters from the release points and in compliance with the release limits listed in Schedule 1C - Table 1.

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**Monitoring**

(1C-2) Monitoring must be undertaken and records kept of contaminant releases to waters from the discharge location for the parameters and not less frequently than specified in Schedule 1C - Table 1. All determinations of the quality of contaminants released must be:

- ◇ performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and
- ◇ made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; and
- ◇ carried out on samples that are representative of the discharge.



Schedule 1C - Table 1

Monitoring Point	Quality Parameters	Release limits		Minimum Monitoring Frequency
		Min	Max	
<b>SURFACE WATERS</b>				
Three Background locations (to be determined in consultation with the EPA) measured at an upcurrent sampling and <i>in situ</i> monitoring point.	<ul style="list-style-type: none"> <li>Turbidity (NTU),</li> <li>Suspended Solids (mg/L)</li> </ul>	-	-	Twice Weekly
	<ul style="list-style-type: none"> <li>Dissolved Oxygen (mg/L)</li> <li>pH</li> </ul>	-	-	Daily
Any overflow / release point from: 1. Acid Sulfate Soils containment / treatment areas; or 2. areas enclosed for construction of the marina	pH - where the background pH is less than 6.5 or more than 9.0	0.2 pH units below background	0.2 pH units above the background	Continuous 24 hour monitoring when discharging
	pH - where the background pH is between 6.5 and 9.0	6.5	9.0	
	Dissolved Oxygen (mg/L)	6 or equal to the background level, whichever is least	-	
	Suspended Solids (mg/L)	-	Must not exceed 10 percent greater than a background value.	Twice weekly when discharging but with not more than 30 minutes separating from collection of the background sample
	Turbidity (NTU)	-	Must not exceed 10 percent greater than a background value.	
	Aluminium - if pH is less than or equal to 6.5		5µg per litre	
	Aluminium - if pH is greater than 6.5		100µg per litre	
	Total Iron (Fe <sup>2+</sup> and Fe <sup>3+</sup> )		1,000 µg per litre	
Ferrous Iron (Fe <sup>2+</sup> )		300 µg per litre		
Downcurrent Waters within 100 metres of any works or release area when dredging the access channel and when parts of the barrier enclosing the marina are removed	Dissolved Oxygen (mg/L)	6 or equal to the background level, whichever is least	-	Twice weekly when dredging the access channel but with not more than 30 minutes separating from collection of the background sample
	pH - where the background pH is less than 6.5 or more than 9.0	0.2 pH units below background	0.2 pH units above the background	
	pH - where the background pH is between 6.5 and 9.0	6.5	9.0	And
	Suspended Solids (mg/L)	-	Must not exceed 10 percent greater than a background value.	Daily when parts of the barrier enclosing the marina are removed but with not more than 30 minutes separating from collection of the background sample
	Turbidity (NTU)	-	Must not exceed 5 NTU greater than a background value.	
<b>GROUNDWATERS</b>				
Four Groundwater monitoring bores derived from a background groundwater monitoring program agreed to by the EPA	Groundwater Height	-	-	Weekly
	pH	6.5	9.0	
	Electrical Conductivity	-	-	
	Aluminium - if pH is less than or equal to 6.5	-	5µg per litre	Monthly. If weekly pH reading is less than 6.5, then weekly monitoring
	Aluminium - if pH is greater than 6.5	-	100µg per litre	
	Total Iron (Fe <sup>2+</sup> and Fe <sup>3+</sup> )	-	1,000 µg per litre	
	Ferrous Iron (Fe <sup>2+</sup> )	-	300 µg per litre	

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## Erosion protection measures and sediment controls

- (1C-3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment. The size of any sedimentation dam must be sufficient to comply with the limits in Schedule 1C - Table 1. Sediment released to the bed of the receiving waters, affected by process water and stormwater contaminated by activities, can only be released when in compliance with the limits in Schedule 1C - Table 1.
- (1C-4) Prevent the release of sediment to waters or a build up of sediment in any stormwater drain.

## Stormwater management

- (1C-5) There must be no release of stormwater runoff that has been in contact with any contaminants other than suspended solids referred to in Schedule 1C - Table 1 at the site to any waters, roadside gutter or stormwater drain.

## END OF CONDITIONS FOR SCHEDULE 1C

## SCHEDULE 1D - NOISE

- (1D-1) The holder of this authority must utilise and maintain Best Available Control Technology (BACT) to all potential emitters of noise for the duration of works on the site. Contractors should familiarise themselves with methods of controlling noisy machinery and alternative construction procedures as explained in Australian Standard AS2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*. This document details typical plant and equipment sound power levels, provides advice on project supervision, and gives guidance on noise control and reduction.

### Site Noise and Vibration Management Plan

- (1D-2) Prior to the commencement of any works on site, the holder of this authority must develop a Site Noise and Vibration Management Plan that addresses all potential emitters of noise and ground vibration (including pile driving) for the site for the duration of authorised works on the site. The plan must include the following items:
- (i) an ambient noise monitoring program prior to the commencement of activities at the site to verify long-term background levels in which:
    - (a) measurements are taken at least hourly, over at least 7 days, at locations representative of the authorised site and noise affected premises that may be impacted upon by the site activities; and
    - (b) measurements must be measured as separate levels for daytime (7am-6pm), evening (6pm-10pm) and night-time (10pm-7am), each of which is the arithmetic mean of all the daytime, evening or night-time measurements during the program; and
    - (c) the statement of the long-term background levels includes the standard deviation of the mean of the measurements used to calculate each of the daytime, evening and night-time levels and details of any extraneous noise; and
  - (ii) appropriate noise modelling to assess the impact of site noise against long-term background levels which includes a statement of the following:
    - (a) the model, and any variation on the model, used for the assessment;
    - (b) a statistical analysis of probable error in the predicted results;
    - (c) the methods, assumptions or uncertainties used in the model; and
  - (iii) the measures to be taken under the plan to minimise the adverse effects of the site activities on surrounding noise affected premises and vibration sensitive places; and
  - (iv) who is responsible for carrying out each of the measures; and
  - (v) selection of plant and equipment; and
  - (vi) hours of operation; and
  - (vii) background noise levels for daytime, evening and night-time; and
  - (viii) calculated **authorised**  $L_{Amax,adj,15min}$  noise levels for daytime, evening and night-time for the site activities based on Schedule 1D - Table 1; and
  - (ix) outcomes of liaison with residents prior to the commencement of site activities; and

- (x) processes for dispute resolution that the applicant must follow to deal with complaints received about the impact of noise and/or vibration from the site activities; and
- (xi) proposed noise monitoring at noise affected premises including:
  - (a)  $L_{Amax,adj,15min}$ ;
  - (b)  $L_{eq,adj,15min}$ ;
  - (c)  $L_{AmaxPeak,15min}$ ;
  - (d) the level and frequency of occurrence of impulsive or tonal noise;
  - (e) atmospheric conditions including wind speed and direction, humidity and temperature
  - (f) effects due to extraneous factors such as traffic noise; and
  - (g) location, date and time of recording; and
- (xii) proposed ground vibration monitoring at vibration sensitive places including:
  - (a) peak particle velocity (mm/s); and location, date and time of recording; and
  - (b) location of the pile driving within the site; and
  - (c) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
  - (d) effects due to extraneous factors; and
  - (e) location, date and time of recording; and
- (xiii) reporting to the administering authority on the implementation of the final Site Noise Management Plan including noise monitoring and dispute resolution results.

(1D-3)The Site Noise and Vibration Management Plan (outlined in condition 1D-2) must be conducted and prepared by an experienced and appropriately qualified person.

(1D-4)The holder of this authority must submit the Site Noise and Vibration Management Plan (outlined in condition 1D-2) to the administering authority at least 28 days prior to the commencement of any works on site.

(1D-5)If the administering authority gives to the holder of this authority any comment on the Site Noise and Vibration Management Plan (outlined in condition 1D-2) within 21 days of receiving the documents, the holder of this authority must have due regard to those comments when implementing the Site Noise Management Plan.

(1D-6)The holder of this authority must implement the final Site Noise and Vibration Management Plan (outlined in condition 1D-2) when undertaking any activities at the site (including pile driving) to which the Site Noise Management Plan pertains.

**Noise nuisance**

(1D-7)All noise from site activities (excluding pile driving) must not exceed the levels specified in Schedule 1D Table 1 outside habitable rooms with doors and windows open or closed at any noise affected premises.

**Schedule 1D - Table 1**

Noise level dB(A) measured as	Monday to Friday			Saturday
	7am – 6pm	6pm – 10pm	10pm - 7am	8am - 1pm
$L_{Amax,adj,15min}$	70dBA or equal to the background plus 10dBA, whichever is least	65dBA or equal to the background plus 10dBA, whichever is least	60dBA or equal to the background plus 3dBA, whichever is least	70dBA or equal to the background plus 10dBA, whichever is least
Noise level dB(A) measured as	Saturday before 8am and after 1pm; Sundays and public holidays			
$L_{Amax,adj,15min}$	60dBA or equal to the background plus 3dBA, whichever is least			

*Background noise levels for the purpose of Schedule 1D - Table 1 are taken from the results of the ambient noise monitoring program required under condition (1D-2)(i) for the respective time periods.*

(1D-8)No pile driving is to occur:

- 
- (i) on Sundays;
  - (ii) Monday to Saturday
    - (a) before 8 am;
    - (b) between 12 noon and 2 pm; and
    - (c) after 5pm.

### **Ground Vibration Conditions**

- (1D-9) Vibration emitted from activities must not cause a nuisance at any vibration sensitive place.
- (1D-10) Vibration emitted from pile driving activities must not exceed the levels specified in British Standard BS6472:1992 *Guide to Evaluation of Human Exposure to vibration in buildings (1Hz to 80Hz)* or equivalent.

### **Noise monitoring**

- (1D-11) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

## **END OF CONDITIONS FOR SCHEDULE 1D**

## **SCHEDULE 1E - WASTE**

### **Waste handling**

- (1E-1) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (1E-2) Records must be kept for five years, and must include the following information:
  - ◇ date of pickup of waste;
  - ◇ description of waste;
  - ◇ cross reference to relevant waste transport documentation;
  - ◇ quantity of waste;
  - ◇ origin of the waste;
  - ◇ destination of the waste; and
  - ◇ intended fate of the waste, for example, type of waste treatment, reprocessing or disposal.

*NOTE: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.*

## **END OF CONDITIONS FOR SCHEDULE 1E**

## **SCHEDULE 1F - LAND**

### **Preventing contaminant release to land**

- (1F-1) Spillage of all chemicals and fuels must be contained within an on-site containment system, controlled and cleaned up in a manner that prevents environmental harm.

*NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.*

## **END OF CONDITIONS FOR SCHEDULE 1F**

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## SCHEDULE 1G - COMMUNITY

### Complaint response

- (1G-1) All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.
- (1G-2) In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically or the industrial estate where the site is located.

## END OF CONDITIONS FOR SCHEDULE 1G

## SCHEDULE 1H - DEFINITIONS

Words and phrases used throughout this licence or approval are defined below:

Where a definition for a term used in this approval is sought and the term is not defined within this approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used.

- (1H-1) **"annual return"** means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for the section 86(2) licence that applies to the development approval.
- (1H-2) **"Acid Sulfate Soil"** means a soil or soil horizon that contains sulfides; or an acid soil horizon affected by oxidation of sulfides (the meaning under the *Environmental Protection (Water) Policy 1997*).
- (1H-3) **"Actual Acid Sulfate Soils"** (AAcid Sulfate Soils) means soils or sediments containing highly acidic soil horizons or layers resulting from the oxidation of soil materials that are rich in iron sulfides such as pyrite (FeS<sub>2</sub>). This oxidation produces acid in excess of the soil's capacity to neutralise the acidity, resulting in a pH of 4 or less. The presence of pale yellow acidic mottles and coatings of jarosite or related products confirms an actual acid sulfate soil, but jarosite need not be present. Soils or sediments with pH 4.1 to 5.5 may also contain acid or remnants of iron and aluminium ions from previous oxidation and hence require treatment.
- (1H-4) **"administering authority"** means the Environmental Protection Agency or its successor.
- (1H-5) **"approval"** means 'notice of development application decision' or 'notice of concurrence agency response' under the IPA.
- (1H-6) **"authorised place"** means the place authorised under this authority/approval for the carrying out of the specified environmentally relevant activities.
- (1H-7) **"annual return"** means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for the section 86(2) licence that applies to the approval.
- (1H-8) **"Best Available Control Technology (BACT)"** means emission control or production methods, techniques, processes, or practices capable of achieving major noise reductions and which the administering authority determines to be applicable.
- (1H-9) **"commercial place"** means a place used as an office or for business or commercial purposes.
- (1H-10) **"dredge spoil"** means material taken from the bed or banks of waters by using dredging equipment or other equipment designed for use in extraction of earthen material.
- (1H-11) **"dust sensitive place"** means -

- ◇ a dwelling, mobile home or caravan park, residential marina or other residential place;
- ◇ a motel, hotel or hostel;
- ◇ a kindergarten, school, university or other educational institution;
- ◇ a medical centre or hospital;
- ◇ a protected area;
- ◇ a park or gardens;
- ◇ a place used as an office or for business or commercial purposes.

and includes the curtilage of any such place.

(1H-12) **"dwelling"** means any of the following structures or vehicles that is principally used as a residence-

- ◇ a house, unit, motel, nursing home or other building or part of a building;
- ◇ a caravan, mobile home or other vehicle or structure on land;
- ◇ a water craft in a marina.

(1H-13) **"intrusive noise"** means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration –

- ◇ is clearly audible to, or can be felt by, an individual; and
- ◇ annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

(1H-14) **" $L_{A, 10, adj, 10 mins}$ "** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

(1H-15) **" $L_{A, 1, adj, 10 mins}$ "** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response

(1H-16) **" $L_{A, max adj, T}$ "** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

(1H-17)  **$L_{AmaxPeak, 15min}$**  means the arithmetic average maximum A-weighted sound pressure level measured over an interval of 15 minutes using Peak time-weighting.

(1H-18)  **$L_{Amax, adj, 15min}$**  means the arithmetic average maximum A-weighted sound pressure level measured over an interval of 15 minutes, adjusted for any tonal characteristics or impulsiveness.

(1H-19) **"land"** in the "land schedule" of this document means land excluding waters and the atmosphere.

(1H-20) **"mg/l"** means milligrams per litre

(1H-21) **"noise affected premises"** means a "noise sensitive place" or a "commercial place"

(1H-22) **"noise sensitive place"** means -

- ◇ a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- ◇ a motel, hotel or hostel; or
- ◇ a kindergarten, school, university or other educational institution; or
- ◇ a medical centre or hospital; or
- ◇ a protected area; or
- ◇ a park or gardens.

and includes the curtilage of such place.

(1H-23) **"noxious"** means harmful or injurious to health or physical well being.

(1H-24) **"NTU"** means nephelometric turbidity units

(1H-25) **"nuisance sensitive place"** includes -

- ◇ a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
  - ◇ a motel, hotel or hostel; or
  - ◇ a kindergarten, school, university or other educational institution; or
  - ◇ a medical centre or hospital; or
  - ◇ a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
  - ◇ a public thoroughfare, park or gardens; or
  - ◇ a place used as a workplace, an office or for business or commercial purposes.
- and includes a place within the curtilage of such a place reasonably used by persons at that place.

(1H-26) "**odour sensitive place**" means

- ◇ a dwelling, mobile home or caravan park, residential marina or other residential place;
  - ◇ a motel, hotel or hostel;
  - ◇ a kindergarten, school, university or other educational institution
  - ◇ a medical centre or hospital;
  - ◇ a protected area;
  - ◇ a park or gardens;
  - ◇ a place used as an office or for business or commercial purposes
- and includes the curtilage of any such place.

(1H-27) "**offensive**" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

(1H-28) "**permanent groundwater table height**" means the normal seasonal groundwater table height prior to influence by human activities as evidenced by groundwater monitoring and soil data.

(1H-29) "**Pile driving**" means sheet pile driving and encased pile driving.

(1H-30) "**Potential Acid Sulfate Soils**" (PASS) means soils or sediments containing iron sulfides or sulfidic material, which have not been exposed to air and oxidised. The field pH of these soils or sediments in their undisturbed state is usually >4, and may be neutral or slightly alkaline. These soils or sediments are saturated with water in their natural state.

(1H-31) "**protected area**" means -

- ◇ a protected area under the *Nature Conservation Act 1992*; or
- ◇ a marine park under the *Marine Parks Act 1992*; or
- ◇ a World Heritage Area.

(1H-32) "**site**" means the place to which this authority relates or the premises to which this approval relates.

(1H-33) "**Total Actual Acidity**" (TAA) and "**Total Potential Acidity**" (TPA) are laboratory analyses determined as outlined in Ahern *et al.*, 1998a or more recent additions or supplements to that document as such become available.

(1H-33) "**vibration sensitive place**" means a noise sensitive place or a commercial place.

(1H-34) "**waters**" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

## END OF DEFINITIONS FOR SCHEDULE 1H

### Schedule 1I – Maps / Plans

**Figure 1.** – Shaded area indicates the area authorised for dredging, extraction and screening activities.



**END OF SCHEDULE 1I**



## Appendix 2 - Response Chronology

Submitter	Draft ToR	SEIS	Addendum
<b><i>Public - Individuals</i></b>			
Angledal S	-	18/12/2002	-
Ballard P	-	13/01/2003	-
Beauchamp R	-	23/12/2002	-
Borer R & K	-	19/12/2002	-
Brown J	-	23/12/2002	-
Bryson A	-	02/01/2003	-
Buick R & D	-	23/12/2002	-
Choi J	-	20/12/2002	-
Collins B	-	19/12/2002	-
Cox J	-	19/12/2002	-
Cox P	-	19/12/2002	-
Fletcher J	-	20/12/2002	-
George R	-	20/12/2002	-
Gubb L	-	20/12/2002	-
Halter S & P	-	24/12/2002	-
Hart A	-	20/12/2002	-
Howells D	-	23/12/2002	-
Jiggins G	-	19/12/2002	-
Keighery J	-	3/01/2003	-
McMahon D	-	17/12/2002	-
Meeder A	-	19/12/2002	14/07/2003
Morgan B	-	02/01/2003	-
Murchic L	-	23/12/2002	-
O'Neill T	-	23/12/2002	-
Pascoe-Webbe T	-	17/12/2002	-
Petit T	-	23/12/2002	-
Robieson K	-	20/12/2002	-
Sheils J	-	23/12/2002	-
Smith C	-	02/01/2003	-
Storey P	-	19/12/2002	-
ten Haken E	-	2/01/2003	-
Thomas J	-	19/12/2002	-
Trott K	-	23/12/2002	-
Upton P & C	-	23/12/2002	-
Walker B	-	23/12/2002	-
Westley J	-	19/12/2002	-
Wort J	-	02/01/2003	-
<i>Petition (Against) – 348 properly made</i>			
<i>Petition (For) – 27 properly made</i>			
<b><i>Public - Organisations</i></b>			
Whitsunday Sailing Club	-	20/12/2002	-
Wildlife Whitsunday	-	02/01/2003	4/08/2003

<b>Submitter</b>	<b>Draft ToR</b>	<b>SEIS</b>	<b>Addendum</b>
<b><u>Advisory Agencies</u></b>			
Department of Aboriginal and Torres Strait Islander Policy	26/02/2002	14/01/2003	27/05/2003
Department of Emergency Services	21/02/2002	20/12/2002	21/05/2003
Department of Employment and Training	4/03/2002	24/12/2002	22/05/2003
Department of Families, Youth and Community Affairs	20/02/2002	9/01/2003	23/05/2003
Department of Housing	-	13/01/2003	29/05/2003
Department of Local Government and Planning	13/03/2002	24/12/2002	10/06/2003
Department of Main Roads	25/02/2002	10/01/2003	4/06/2003
Department of Natural Resources and Mines	18/02/2002	23/12/2002	2/06/2003
Department of the Premier and Cabinet	25/02/2002	2/01/2003	20/06/2003
Department of Primary Industries	21/02/2002	16/01/2003	19/06/2003
Department of Tourism, Racing and Fair Trading	20/02/2002	10/02/2003	11/06/2003
Environmental Protection Agency	4/03/2002	4/03/2003	6/06/2003
Great Barrier Reef Marine Park Authority	21/02/2002	23/12/2002	23/05/2003
Queensland Transport	22/02/2002	20/12/2002	20/05/2003
Whitsunday Shire Council	15/02/2002	8/01/2003	25/06/2003
<b><u>Commonwealth Consultation</u></b>			
Commonwealth Department of the Environment and Heritage	21/02/2002	23/12/2002	27/05/2003

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### Appendix 3 - List of Abbreviations

ASS	Acid Sulfate Soils
CDEH	Commonwealth Department of the Environment and Heritage (formerly Environment Australia)
CHMP	Cultural Heritage Management Plan
CG	Coordinator-General
DATSIP	Department of Aboriginal and Torres Strait Islander Policy
DEH	Department of Environment and Heritage (now Environmental Protection Agency)
DES	Department of Emergency Services
DET	Department of Employment and Training
DF	Department of Families
DIR	Department of Industrial Relations
DLGP	Department of Local Government and Planning
DMR	Department of Main Roads
DNRM	Department of Natural Resources and Mines
DOH	Department of Housing
DPI	Department of Primary Industries
DSD	Department of State Development
EA	Environment Australia (now Commonwealth Department of the Environment and Heritage)
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMPr	Environmental Management Program
EPA	Environmental Protection Agency (formerly Department of Environment and Heritage)
EP Act	<i>Environmental Protection Act 1994</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPP	Environmental Protection Policy
EQ	Education Queensland
ERA	Environmentally Relevant Activity
GBRMPA	Great Barrier Reef Marine Park Authority
GBRWHA	Great Barrier Reef World Heritage Area
IAS	Impact Assessment Study
IDAS	Integrated Development Assessment System
InAS	Initial Advice Statement
IPA	<i>Integrated Planning Act 1997</i>
PASS	Potential Acid Sulfate Soils
QFS	Queensland Fisheries Services, DPI
QT	Queensland Transport
<i>SDPWO Act</i>	<i>State Development and Public Works Organisation Act 1971</i>
SEIS	Supplementary Environmental Impact Statement
TMP	Traffic Management Plan
ToR	Terms of Reference
WAB	Windward AB Pty Ltd (joint proponent)
WS Club	Whitsunday Sailing Club (joint proponent)

– END OF REPORT –