Queensland Government
State Development and Innovation

Port of Hay Point

Apron Areas and Departure Path Capital Dredging

Environmental Impact Statement

Terms of Reference

April 2005

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Part A – Preamble

Project Background

Project Proponent

The Ports Corporation of Queensland (PCQ) is a Government Owned Corporation and a port authority under the *Transport Infrastructure Act 1994*. PCQ is responsible for managing and developing eight trading ports throughout Queensland, including the Port of Hay Point located approximately 40 kilometres south of Mackay.

GHD Pty Ltd has been commissioned by PCQ to prepare the Environmental Impact Statement (EIS) for this Project.

Project Summary

The Port of Hay Point is Queensland's largest coal export port. Two coal terminals export coal through the port, the Dalrymple Bay Coal Terminal (DBCT) and the Hay Point Coal Terminal (HPCT). DBCT is the larger of the two coal terminals. It is owned by DBCT Holdings (DBCTH) and operated by the Dalrymple Bay Coal Terminal Pty Ltd (DBCTPL) under contract to the lessee, Prime Infrastructure Limited (PIL). HPCT is owned by Central Queensland Coal Associates (CQCA) and operated by Hay Point Services Pty Ltd (HPS).

The Port of Hay Point exported close to 80 million tonnes of coal in 2004 with export volumes planned to increase significantly in the next 5 years. Currently, ships are departing the port short-loaded due to draft restrictions. This has an impact on the efficiency of exports through the port and increases the number of ship visits required to export the coal.

An opportunity exists to increase the allowable sailing draft of vessels and hence increase coal exports from the existing facilities and lower transport costs and ship visits through the development of a departure path and deepening of the existing apron areas. The reduction in short-loading would allow the export of an additional $100 million per annum in coal sales, while providing the additional capacity to make these sales. The Project includes two key aspects:

- **Dredging:** Dredging of material in the order of 9 million cubic metres will be required. This is an initial estimate only and a more definitive estimate is being prepared in the detailed engineering phase, which is being carried out in conjunction with the preparation of the EIS. The dredging will include works:
  - To provide a ship manoeuvring apron immediately adjacent to and parallel to the existing DBCT and HPCT dredged berths. The apron will be at least 500 metres wide. The apron will be dredged to achieve a minimum declared depth of RL -14.9 metres LAT. Actual dredging depth will need to be marginally greater to maintain this as the minimum depth between maintenance dredging cycles.
  - To provide a departure channel from apron to sea. The channel width is to be 500 metres wide for the first 500 metres then taper to a width of 300 metres over the next 3,000 metres. There will be a transition zone between the apron and path. The remainder of channel will be 300 metres wide and continue until a minimum natural depth of RL –14.9 metres is achieved. The total channel length is expected to be approximately 9,500 metres long. The widths referred to relate to the base of the apron and path. Both have sloped sides and the width of the seabed will be greater and will vary depending on the actual depth of material removed. Dimensions of the works will be developed and presented in the EIS.

– The entire departure path remains in port limits, but a large part will also be in the Great Barrier Reef Marine Park (GBRMP) due to an overlap of the two areas.

- **Disposal of dredged material:** The proponent proposes dredged material will need to be disposed of largely at sea. This material will be marine sediment only and will undergo full sediment testing as required by the National Ocean Disposal Guidelines for Dredged Material (NODGDM). Part of the dredged material may need to be located to a new spoil ground within the GBRMP although still within port limits.

The capital works are expected to commence in 2006 and may continue to 2007. Maintenance works will occur following completion of the capital works. The maintenance works schedule will be determined following completion of the channel design.

Administrative Details for Terms of Reference

State Development Public Works Organisation Act 1971

The *State Development and Public Works Organisation Act* 1971 (SDPWOA) establishes an environmental assessment process for projects declared to be a 'significant project'. This process removes duplication with the *Environment Protection and Biodiversity Conservation Act 1999*, where the process is accredited by the Commonwealth Department of the Environment and Heritage (DEH), and streamlines approval processes under the *Integrated Planning Act 1997.*

On 16 September 2004 the project was declared a 'significant project' pursuant to Section 26 of the *State Development and Public Works Organisation Act 1971* (SDPWOA). The EIS for the project will comply with all EIS requirements specified in the SDPWOA.

Environment Protection and Biodiversity Conservation Act 1999

The *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC Act)* establishes a Commonwealth process for environment assessment and approval of proposed actions that are likely to have a significant impact on matters of national environmental significance or on Commonwealth land. The purpose of the proposal referred by PCQ under the EPBC Act is to increase the water depth for vessels departing the Port of Hay Point, Dalrymple Bay, Queensland by conducting capital dredging to create a new departure path and apron area at the Port. The proposal includes the relocation of clean dredged material principally to an ocean disposal ground within the port limits and also involves subsequent maintenance dredging required for the apron area and departure path.

The proposal was determined to be a 'controlled action' under the EPBC Act on 7 October 2004 and the controlling provisions for the proposal are Sections 12 and 15A (World Heritage), Sections 18 and 18A (Listed threatened species and communities), Sections 20 and 20A (Listed migratory species) and Sections 23 and 24A (Marine environment). As such, the proposal (Reference Number EPBC 2004/1775) requires Australian Government approval in addition to the necessary Queensland State and Local Government approvals.

On 12 October 2004 a delegate of the Queensland Minister for Environment determined that the Bilateral Agreement between the Australian Government and Queensland (*An Agreement between the Australian Government and the State of Queensland under Section 45 of the Australian Government Environment Protection and Biodiversity Conservation Act 1999 Relating to Environmental Assessment*) is applicable. The level of assessment for the proposal has been set at EIS under Part 4 of the Queensland *State Development and Public Works Organisation Act 1971* with a 20 business day public review period.

The Great Barrier Reef Marine Park Authority (GBRMPA) and the Australian Government Department of the Environment and Heritage (DEH) subsequently received applications for permits under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) and the *Environment Protection (Sea Dumping) Act 1981* (Sea Dumping Act) for related parts of the proposal. These agencies have referred these actions to the Minister for the Environment and Heritage under Section 161 of the EPBC Act for his advice. In the case of these EPBC Act Section 161 referrals, the scope of the environmental impact assessment must address all relevant aspects of the environment. The delegate of the Minister subsequently determined that the referred actions under the GBRMP Act and the Sea Dumping Act should be assessed by accredited assessment, namely by EIS under Part 4 of the *Queensland State Development and Public Works Organisation Act 1971.*

The DEH will be involved in the EIS assessment process through regular liaison with the Queensland Department of State Development and Innovation, consistent with the co-operative arrangements developed under the Bilateral Agreement. Under these arrangements copies of assessment documentation will be provided to the DEH for comment. Once the assessment process has been completed a copy of the assessment report will be provided to the Australian Government Environment Minister. Approval of the proposal will then be sought from the Australian Government Environment Minister in accordance with the procedures set out in the EPBC Act.

The assessment is required to be conducted in accordance with Schedule 1 of the Bilateral Agreement. Amongst other things, Schedule 1 includes the requirement for the assessment to contain enough information about the action and its relevant impacts to allow the Australian Government Environment Minister to make an informed decision whether or not to approve the action under the EPBC Act. This requirement also includes the need for enough information about the direct and indirect impacts of the action. Further, paragraph 3.1(c) of Schedule 1 to the Bilateral Agreement requires guidelines for a draft EIS to address the matters mentioned in Division 5.2 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations) for an environmental impact statement. Regulation 5.04 and Schedule 4 of the EPBC Regulations set out relevant matters relating to this requirement. A copy of Schedule 4 to the EPBC Regulations is attached to these Terms of Reference (ToR).

Environment Protection (Sea Dumping) Act 1981

The DEH has issued guidelines for sampling and testing sediment to determine the suitability of dredge material for ocean disposal which will need to be adhered to.

The Act is administered by the DEH or the GBRMPA if dumping is to take place within the GBRMP. The Sea Dumping Act applies in respect of all Australian waters (other than waters within the limits of a State or the Northern Territory inland waters), from the low water mark out to the limits of the Exclusive Economic Zone.

The Sea Dumping Act regulates the deliberate loading and dumping of wastes and other matter at sea. It applies to all vessels, aircraft or platforms in Australian waters and to all Australian vessels or aircraft in any part of the sea.

The DEH has received an application for a permit under the Sea Dumping Act and has referred the authorisation decision for this action to the Minister for the Environment and Heritage under Section 161 of the EPBC Act for his advice. The delegate of the Minister has determined that this Section 161 referral should be assessed by accredited assessment, namely by EIS under Part 4 of the SDPWOA. The matter protected is the environment.

Great Barrier Reef Marine Park Act 1975

The *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) establishes a framework for the establishment, control, management and development of the Great Barrier Reef Marine Park. The act is administered by the GBRMPA.

Regulation 61 of the *Great Barrier Reef Marine Park Regulations 1983* states that the GBRMPA must assess any project that has the potential to impact on the marine park. Approvals for the proposed works will be sought from the GBRMPA. In seeking these approvals, the proponent will provide the information outlined in Regulation 74 (5) of the Act to GBRMPA to enable it to make an assessment.

A copy of Section 74(5) of the *Great Barrier Reef Marine Park Regulations 1983* forms Attachment 1 of these Draft ToR.

GBRMPA has received an application for a permit under the GBRMP Act and has referred the authorisation decision for this action to the Minister for the Environment and Heritage under Section 161 of the EPBC Act for his advice. The delegate of the Minister has determined that this Section 161 referral should be assessed by accredited assessment, namely by EIS under Part 4 of the *State Development and Public Works Organisation Act 1971*. The matter protected is the environment.

Historic Shipwrecks Act 1976

The *Australian Government Historic Shipwrecks Act 1976* provides for the protection of historic shipwrecks and relics in waters under Commonwealth responsibility. All wrecks that have been sunk for more than 75 years are deemed to be historic shipwrecks. Waters under Commonwealth responsibility extend from the astronomical mean low water mark to the outer edge of the continental shelf. Wrecks above the astronomical mean low water mark or within particular gulfs, bays, or estuaries fall within the responsibility of the individual States and Territories. The objective of the Act is to ensure the protection and conservation of maritime archaeological sites while encouraging responsible public access. The Act prohibits damage, interference, removal or destruction of a historic shipwreck or associated relics. The Act is administered by the Australian Government in conjunction with the States, the Northern Territory and Norfolk Island. All States and the Northern Territory have complimentary legislation in place to protect wrecks and relics in State waters.

Integrated Planning Act 1997

The *Integrated Planning Act* 1997 (IPA) establishes the Integrated Development Assessment System (IDAS) which integrates a range of development approvals including the *Coastal Management and Protection Act 1995*.

Under Schedule 8 development which is a material change of use and which is inconsistent with a land use plan approved under the Transport Infrastructure Act 1994, Section 171 triggers assessment under the IPA. The proposal is consistent with the Land Use Strategy for the Port of Hay Point and will therefore not require a development approval for material change of use.

Coastal Protection and Management Act 1995

The *Coastal Protection and Management Act 1995* (CP&M Act) provides a framework for the development of regional plans which regulate development in coastal areas. The regulatory mechanisms are administered under the IPA. An assessment under the CP&M Act is triggered in relation to assessable development within tidal waters. This includes dredging and disposal of dredge material within tidal areas.

An IDAS application for operational works in relation to works within tidal waters and disposal of dredged material in tidal waters will be required.

Fisheries Act 1994

The *Fisheries Act 1994* was rolled into the *Integrated Planning Act 1997* on 1 March 2003. Approval may be required in relation to damage or removal of a marine plant such as seagrass or marine algae.

Purpose of the Terms of Reference

This ToR essentially outlines the issues that should be considered in preparing the EIS. Furthermore, the ToR provides the framework for the EIS, including information on the purpose and role of the EIS, and the factors considered to be most significant for the proposal. It indicates the types of studies necessary and the data that should be provided.

All potentially significant impacts of the proposed development on the environment are to be investigated, and requirements for the mitigation of any adverse impacts are to be detailed in the EIS. Any prudent and feasible alternatives should be discussed and treated in sufficient detail and reasons for selection of the preferred option should be clearly identified. The nature and level of investigations should be relative to the likely extent and gravity of impacts. The guidelines should, however, not be interpreted as excluding from consideration any matters which are currently unforeseen, which may arise during ongoing scientific studies or which may arise from any changes in the nature of the proposal during the preparation of the EIS, the community consultation process and associated documentation.

The EIS should address at least the requirements as set out in this ToR.

EIS Guidelines

The objective of the EIS is to identify potential environmental impacts and to ensure that impacts are avoided where possible. Where unavoidable, impacts must be examined fully and addressed, so that the development is based on sound environmental protection and management criteria.

An EIS should provide:

- a description of the relevant aspects of the existing social, economic, natural and built environment;
- a description of the development proposal and means of achieving the development objectives;
- definition and analysis of the likely impacts of the development on the environment;
- a framework against which Government decision-makers can consider the environmental aspects of the proposal and set conditions for approval to ensure environmentally sound development;
- definition of all significant impacts and measures proposed to mitigate adverse effects; and
- recommendations on the need for and contents of any environmental management plans and/or operational plans to mitigate adverse effects.

To the greatest extent possible the information presented in the EIS is to be factual and is to be based on quantitative data assessment and is to involve a minimum of subjective judgements. The data is to be sufficient to enable the State and Australian Governments and local bodies to determine accurately the likely impact, both direct and indirect, of the project.

EIS Objectives and Key Issues

Objectives

The objectives of the EIS are as follows:

- to provide information on the proposal and development process to the community and decision makers;
- to comprehensively identify and evaluate all relevant issues associated with the proposal;
- to identify all potential environmental, cultural, social, transport and land use planning impacts of the preferred concept, and recommend infrastructure and facilities needs together with other design and operational measures required to minimise or compensate for adverse impacts and enhanced benefits;
- to consult with the community and relevant stakeholders in the process of identifying, assessing and responding to the impacts of the proposal;
- to identify all necessary licences, planning and environmental approvals including approval requirements pursuant to the EPBC Act, *Environmental Protection (Sea Dumping) Act 1981,* CP&M Act, *Great Barrier Reef Marine Park Act 1975, Fisheries Act 1994,* IPA*, Environmental Protection Act 1994* and other legislation; and
- to provide an input to 'State and Australian Government' decision-making processes, assisting with the determination of whether to accept or modify the proposal, approve it with conditions or carry out further studies.

Key Issues

The issues to be addressed as part of the EIS can be divided into the following categories:

- detailed project description;
- project justification and alternatives;
- impacts on marine flora and fauna;
- impacts on marine processes;
- impacts on water quality;
- marine sediment quality issues;
- impacts on areas of cultural heritage value or indigenous significance;
- air emissions and impacts;
- impacts of noise and vibration;
- impacts on surrounding land uses and land use planning;
- economic issues (including impacts on businesses in surrounding areas);
- shipping impacts
- safety and emergency; and
- waste management.

The EIS will be required to consider in detail relevant issues under each of these categories and all other impacts on the physical and social environment. The information required is described in the following sections.

Public Consultation on Terms of Reference

The Draft ToR are being publicly notified in *The Australian, The Courier Mail*, *The Daily Mercury*, the *Pioneer News* and on the PCQ website, inviting comment. Any comments and submissions will need to be provided within a submission period of 20 business days.

Content and Format of the EIS

The EIS Report will be used to inform the public, decision-makers and relevant stakeholders of the potential impacts of the project, and the management of those impacts. The report should be written in a clear plain English style, easily understood by the general reader. Text within the report should be referenced and where appropriate supported by maps, plans, diagrams and other descriptive details.

The report should be supported by appendices, which will include detailed results of technical studies and results of community consultation (including detailed submissions where appropriate, summaries of submissions, comments and inputs provided, details of individuals and organisations consulted etc).

An overview of the methodology used to undertake the various assessments should be provided in each section.

The EIS should contain and address at least the components outlined in Part B.

The proponent shall provide copies of the EIS (in hardcopy and CD versions) to the Department of State Development and Innovation for distribution to Advisory Agencies, and to the public for comment.

The EIS shall be placed on the proponent's Internet website.

Assessment and Approval Requirements

The EIS should detail how it meets the assessment and approval requirements of all relevant legislation, namely:

- *SDPWOA*
- *EPBC Act*
- *Environment Protection (Sea Dumping) Act 1981*
- *GBRMP Act*

Part B – Contents of EIS

1. Executive Summary

The EIS Report should include a concise summary of relevant information to enable the reader to obtain a general understanding of the proposal, potential environmental impacts, proposed environmental protection measures, safeguards, and monitoring procedures.

A summary of the environmental issues could be included in a tabular format.

2. Glossary of Terms

A glossary of technical terms, acronyms and references should be provided.

3. Introduction

An introduction should be provided detailing the key drivers and reason/s for the EIS, the audience whom will be reviewing the document, the approval process and legislative context, structure of the document and the level of detail provided in the EIS.

The following general information should be provided:

- the title of the Project;
- the full name and postal address of the designated proponent;
- a clear outline of the objective and the expected benefits of the Project;
- the location of the Project;
- the background to the development of the Project;
- the current status of the Project; and
- the consequences of not proceeding with the Project.

Project Proponent

This section should provide details regarding PCQ and key contact details for project staff and the project consultants, the EIS consultant and any sub-consultants, detailing their primary function and areas of expertise.

Pursuant to the SDPWOA, the Proponent needs to provide details of any Australian proceedings relating to an Australian environmental law against it or any applicants for permits under an environmental law for the project. Furthermore, details of the Proponent's environmental policy and planning framework must be incorporated into the EIS.

Project Description

This section should provide a detailed description of the key elements of the Project, including the following:

- all the components of the Project;
- the location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;
- how the works are to be undertaken and design parameters for those aspects of the structures or elements of the Project that may have relevant impacts; and
- any environmental control measures already proposed by the proponent.

This section should also provide a brief description of background studies, which have informed the development of the Project.

Project Objectives and Scope

This section should provide a statement of the objectives, which have led to the formulation of the Project and brief outline of the events, which have influenced the formulation of the Project. This should include a brief discussion of feasible alternatives, proposed time frames for implementation and expected project life, anticipated establishments costs and relevant actions already undertaken in relation to the Project.

Environmental Impact Assessment Process

The EIS process will meet the information requirements of the SDPWOA, the EPBC Act, the Sea Dumping Act and the GBRMP Act. This section will clearly identify the relevant legislative processes and the methodology being adopted to comply with the relevant legislation.

Methodology of the EIS

This section should include a description of the impact assessment process steps, timing and decision making process for the relevant stages of the Project. This should also include a description of how the consultation process will be integrated with other elements of the impact assessment, including timing and stages for public input.

Objectives of the EIS

This section should provide a statement of the objectives. The structure of the EIS can then be outlined as an explanation of how the EIS will meet its objectives.

The objectives of the EIS are set out in Part A of these Terms of Reference.

The role of the EIS in providing the project's Environmental Management Plan (EMP) should also be discussed, particularly in relation to providing management measures that can become conditions for Project approval.

Submissions

Details of how public submissions on the Draft EIS will be addressed and considered in the decision making process should be included.

Public Consultation Process

This section should outline the methodology for undertaking public consultation.

Section 2.01 (h) and (i) of Schedule 4 of the EPBC Regulations requires the following information relating to consultation and the identification of affected parties to be provided:

- any consultation about the action, including:
  - any consultation that has already taken place;
  - proposed consultation about relevant impacts of the action;
  - if there has been consultation about the proposed action - any documented response to, or result of, the consultation;
- identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.

Consultation Overview

Community consultation is an essential element of the EIS process, as it will assist with identifying issues, potential impacts (particularly social and community impacts) and builds relationships between the project proponent and the community. Consultation will facilitate ongoing communication and allow the community to become involved in the decision-making processes.

It will be necessary to carry out community consultation sufficient to enable all stakeholders to understand the proposal and provide informed comment. The consultation process should also be broad enough to ensure wide awareness of the proposal and EIS process, and provide adequate opportunities for input.

The involvement of the community will need to occur throughout the EIS and be an integral component of the EIS.

Objectives of Community Consultation

The objectives of community consultation for the EIS are to:

- enhance community awareness and understanding of the project, with the provision of adequate and appropriate information;
- identify key stakeholders (including representatives of stakeholder groups), their needs and values;
- facilitate involvement by the community with a two-way flow of information between the study team and interested members of the public;
- actively engage community input in an atmosphere of cooperation, support and encouragement;
- provide information on the EIS process;
- seek input in terms of key issues and concerns and suggestions to mitigate these concerns;
- seek feedback on the preferred concept;
- provide information on the outcomes of the study; and
- demonstrate that issues of concern to the community have been identified and considered during the EIS.

Stakeholders for the Project

The stakeholders, or ‘community’, for the project will include advisory bodies (such as government agencies and authorities), community and special interest groups, and other members of the Community Reference Group.

Different methods and approaches to consultation will be necessary, depending on the needs of different stakeholders.

Advisory Bodies

Advisory bodies include government departments, authorities, agencies and key service providers. These organisations will be consulted to obtain their views and identify any statutory requirements they consider relevant to the study. Advisory bodies will be provided with copies of the final ToR for the EIS and sent copies of the EIS for review. Written submissions will be invited from advisory bodies.

Advisory bodies include:

- Environmental Protection Agency (EPA).
- Department of Aboriginal and Torres Strait Islander Policy (DATSIP).
- Department of Communities (DC).
- Department of Emergency Services (DES).
- Department of Employment and Training (DET).
- Department of Housing (DH).
- Department of Local Government and Planning, Sport and Recreation (DLGPSR).
- Department of Main Roads (DMR).
- Department of Natural Resources and Mines (DNRM).
- Department of the Premier and Cabinet (DPC).
- Department of Primary Industries and Fisheries (DPIF).
- Queensland Transport (QT) and Maritime Safety Queensland (MSQ).
- Queensland Treasury.
- Sarina Shire Council (SSC).
- Great Barrier Reef Marine Park Authority (GBRMPA).

Other Stakeholder, Community and Special Interest Groups

Relevant stakeholder, community and special interest groups should be identified and consulted. Such groups include:

- Australian Maritime Safety Authority (AMSA).
- Australian Hydrographic Office (AHO).
- Australian Fisheries Management Authority (AFMA).
- Mackay City Council (MCC).
- PIL, DBCT Pty Ltd and HPS.
- Port of Hay Point Community Reference Group, plus other relevant local progress associations, community and other resident organisations, this will include the residents of Louisa Creek, Half Tide and Salonika.
- Mackay Turtle Watch.
- Mackay Marine Advisory Group (LMAC).
- Relevant business associations including any chambers of commerce.
- Indigenous and Native Title Claimant organisations.

- Relevant community groups such as ratepayers association, environmental and heritage groups.
- Service providers.

The General Community

The general community, who may not be represented by established interest groups, are also important stakeholders for the project. The consultation process should also include appropriate mechanisms targeted at ensuring adequate involvement of the general community, both in the study area and in the broader context.

Stages in the Consultation Process

It is suggested that the consultation process occur broadly according to the following stages:

1. Information review, prepare consultation plan and develop an understanding of the local community and stakeholder groups;
2. Project announcement and issues identification with the community;
3. Present preliminary results from the consultation process as input into the design of a preferred concept for the development to form the basis of the EIS;
4. Provide information on and seek submissions on the draft EIS; and
5. Provide information on the outcomes of the EIS process, and 'where to from here'.

The EIS consultant will be able to provide feedback from the exhibition of this draft ToR, together with an analysis of stakeholder issues being carried out concurrently with the exhibition, which should be used as an input into the consultation process.

Consultation and Communication Plan

The first stage of the process should involve preparation of a detailed Consultation and Communication Plan, which will describe the consultation program that will be implemented, including:

- Types of activities.
- Timing.
- Integration with other EIS activities and the project development process.
- Responsibilities.
- Communication protocols.

Consultation Activities

A variety of consultation methods should be used to provide a range of opportunities for input and involvement. Consultation activities should include as appropriate, but not be limited to:

- Newsletters.
- Advertisements.
- Provision of e-mail, facsimile and postal address details.
- Telephone information-line.
- Presentation at the CRG meeting.
- One-on-one meetings.
- Submissions and feedback forms.

Recording and Reporting

Details of the consultation process are to be included in the EIS including concerns/issues identified and measures proposed to mitigate impacts.

All information and input provided by the community is to be registered and documented (preferably in electronic form), including all telephone and written comments, and the results of interviews, meetings and discussions.

Reports on the consultation process (including activities and results) will need to be prepared at the end of each stage.

Project Approvals

Relevant Legislation and Policy Requirements

The EIS should identify all the approvals, permits and licenses that will need to be obtained for the dredging and maintenance of the proposed project.

Section 5.01 of Schedule 4 of the EPBC Regulations requires the following information relating to other approvals and conditions to be provided:

- details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:
  - what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy; and
  - how the scheme provides for the prevention, minimisation and management of any relevant impacts;
- a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions that apply to the action;
- a statement identifying any additional approval that is required; and
- a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

This should include necessary licenses, planning and environmental approvals including approval requirements under the EPBC Act*, Environment Protection (Sea Dumping) Act 1981,* GBRMP Act*,* CP&M Act*,* IPA, *Environmental Protection Act 1994, Fisheries Act 1994* and other legislation. Approval and license requirements will need to cover all aspects of the dredging and operation phase including any environmentally relevant activities, as defined under the *Environmental Protection Act 1994*. These will need to be identified early in the EIS process.

Planning Context

This section should discuss the project and provide and assessment of the project's consistency with relevant planning policy for the area and region. This should include an assessment of the project's consistency with the Port of Hay Point Land Use Strategy and the policy matters relevant to the use and development of the GBRMP.

As a minimum this should include:

- a review of the objectives of the GBRMPA zoning plan in accordance with the requirements of clause 74(5)(a) of the GBRMP Regulations 1983;

- assessment of the likely effect of granting permission on future options for the Marine Park in accordance with the requirements of clause 74(5)(c) of the GBRMP Regulations 1983;
- a description of the nature and scale of the proposed use in relation to the existing use and amenity, and the future desirable use and amenity, of the relevant area and of nearby areas in accordance with the requirements of clause 74(5)(e) of the GBRMP Regulations 1983;
- a review of other relevant planning controls, by-laws and policies relating to the study area and adjacent lands;
- details of all licences, planning and environmental approvals required;
- regional strategies or plans that relate to the study area or proposal (existing or in preparation); and
- relationship to other significant developments (existing or proposed) in the study area or surrounding areas.

Project Need and Alternatives

This section should discuss the justification and need for the project with particular reference made to the environmental, economic and social costs and benefits.

This section should also describe all feasible alternatives that have been investigated, providing sufficient detail to demonstrate the reasons for preferring certain options and rejecting others. The discussion should include:

- The alternative of taking no action;
- Identification of feasible spoil disposal alternatives, including
  - Options for dredge spoil re-use
  - Land based disposal
  - Alternative dredge material placement areas
- Discussion of the methodology adopted to discern between feasible options.
- Discussion, with supporting technical information, of why all or part of the suitable dredge spoil material cannot be used for beach nourishment, nearshore nourishment, extractive industry or other beneficial purpose.
- An analysis of the impact of the various alternatives on the operational capacity of the port.

Section 2.01(g) of Schedule 4 of the EPBC Regulations requires the following information relating to feasible alternatives to be provided:

- to the extent reasonably practicable, any feasible alternatives to the action, including:
  - if relevant, the alternative of taking no action;
  - a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action; and
  - sufficient detail to make clear why any alternative is preferred to another.

4. Description of the Project

The purpose of this section is to provide a description of the Project through its lifetime of construction, operation and maintenance.

Location and General Description

The project should be described in the local, regional, and National context.

The Project site should be described in detail including details of the area to be dredged and spoil disposal location. This should be described using detailed mapping of the Port and surrounding areas.

In accordance with clause 75(5)(g) of the GBRMP Regulations 1983, the means and transport for entry into, use within, or departure from, the zone or designated area and the adequacy of provisions for aircraft or vessel mooring, landing, taking off, parking, loading and unloading should be addressed.

Section 1.01(f) of Schedule 4 of the EPBC Regulations requires the following general information to be provided:

- how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action.

Construction

The extent and nature of the Project's construction phase should be described. This should include:

- the type and method of dredging proposed;
- the dredge equipment;
- the expected length of the dredging campaign; and
- the amount of spoil to be removed.

Maintenance Dredging

The description should including:

- the type and method of dredging proposed;
- the dredge equipment:
- the frequency and duration of maintenance dredging campaigns: and
- the amount of spoil to be removed for each campaign.

Spoil Disposal

The method, location and issues associated with the disposal of dredged material should be described including:

- the depth of spoil material deposited on the sea floor;
- differences in characteristics between the spoil material and the sea floor sediments at the disposal site;
- capacity and anticipated life span of disposal area;
- possible restrictions on dredging and spoil disposal times;

- the spoil disposal area and its characteristics;
- quantities of spoil for disposal; and
- quality of spoil material.

Preliminary planning as undertaken by PCQ should be documented as reference to the assessment of alternates to achieve PCQ's operational outcomes.

This section should incorporate the outcomes of recent and new investigations into land based disposal and alternate sea-based disposal options.

5. Description of Existing Environment

This section should provide information on the biophysical, social, cultural and economic environment in the vicinity of the proposal (the study area). Aspects of the environment should be described to the extent necessary for the assessment of potential impacts of the proposal. Baseline information from other relevant studies should be used and referenced where appropriate.

Any relevant studies undertaken and commitments given in relation to previous studies should be identified and assessed for their relationship to this project.

As a minimum, the following information should be provided:

Marine Flora and Fauna

This section should detail the existing marine flora and fauna and biodiversity conservation values within the area directly or potentially impacted by dredging, spoil disposal or resuspension of sediment from spoil grounds, addressing at least the following:

- native and introduced marine flora and fauna (including introduced marine pests);
- marine ecosystems;
- integrity of ecological processes;
- habitats of significance, rare or threatened species; and
- integrity of natural habitats:

Where possible environmental thresholds for specific impacts on marine flora and fauna should also be defined having regard to established published benchmarks. For example, the threshold for turbidity levels and occurrence frequency could be defined in relation to impacts upon seagrass beds.

Flora and fauna species and marine habitats within the study area should be defined through searches of the appropriate State and Commonwealth databases, review of previous studies and review of aerial photography, with field studies undertaken where inadequate information is available to sufficiently describe the marine communities for the purposes of the current impact assessment.

Specific issues to be highlighted include:

- presence of turtles and other marine mammals within the study area;
- sea floor habitat and benthic macroinvertebrate communities in the vicinity of the spoil ground; and

an assessment of the value of the marine habitats/ecosystems to fauna of conservation significance such as turtles, dugongs and whales.

Turtles

A desktop review of information on the turtle communities of the study area, particularly the Flatback Turtle (*Natator depressus*), should be undertaken with specific attention paid to any anecdotal or recorded information on turtle populations frequenting the Hay Point area and any known nesting sites.

Reference should be made to detailed studies of the turtle populations in Hay Point carried out by the Queensland Parks and Wildlife Service in 2002 and 2003. Mackay Turtle Watch will be consulted on historical data for the area.

This information will be used to establish the basis for recommendations in relation to the most appropriate management measures to be adopted in order to minimise the risk of turtle injury or death.

Sea Floor Habitat and Benthic Macroinvertebrates

A review of recently completed survey work undertaken by DPIF should be undertaken, in consultation with DPIF, to determine the need for any additional works. A survey of benthic macroinvertebrate communities should be undertaken at appropriate control sites around the disposal site. Benthic macroinvertebrate communities at the proposed spoil ground should be characterised and an assessment made as to the adequacy of available information for the assessment of the potential impacts of dredge spoil disposal. The effect of ongoing maintenance dredging on the benthic fauna at the spoil ground should also be considered.

Marine and Coastal Processes

This section should include a review of data from previous studies and assess the validity of previous modelling based on monitoring data, especially in relation to movement of turbid waters. The review should be supplemented, where necessary, by hydrodynamic and geomorphological modelling. Details should be provided of measured data collected for model calibration and verification and, for a suitable coverage of the model, and comparisons provided between model results and data.

This should include the following:

- identifying sediment movement in relation to proposed channel and any sea or nearshore-based disposal area(s);
- identifying sedimentation and turbidity as a result of dredging activities (and potential natural environment impacts);
- investigating the retention or otherwise of dredge spoil within the spoil disposal area;
- identifying the point source location, concentrations and movement of total phosphorous and nitrogen (nutrients) that may result from dredging or sea disposal of sediment.;
- assessing the sedimentation rates of the apron and departure channel and provision of details of the assessment method and/or comparison with historical siltation rates;

providing details of local and regional coastal processes including details of current (direction and velocity over a range of tide levels), waves, and potential sediment transport rates and directions for the study area and surrounding coastline; and

investigating the geomorphodynamics of the area to provide an understanding of the past and present day coastal processes.

The relationship of these processes to marine flora and fauna and biological processes within the study area should also be discussed. The relationship between currents, wave actions and extreme

events (such as cyclones) and how they influence coastal processes should also be discussed. This discussion is to be based upon technical supporting information from previous studies and new investigations, where appropriate.

Water Environment

This section should detail the existing characteristics and condition of marine waters. Issues to be addressed include:

- description of surrounding marine waters in terms of physical, chemical and biological characteristics;
- identify potential sources and nature of pollutants to the marine environment;
- description of current water quality; and
- effects of coastal processes including the currents, tides, storm surges, freshwater flows and pollutant migration on water quality.

Specifically, background turbidity levels should be described and any historical water quality data (including aerial surveillance) collected during dredging previous campaigns should be reviewed. If possible, an understanding of the extent of sediment plume migration should be developed. A review of nutrient levels carried into the Dalrymple Bay area via freshwater flows will also be conducted for comparison in relation to expected concentration levels and ecological significance associated with the dredged material. This assessment will also require the integration of the results of hydrodynamic and geomorphological studies.

Sediment Quality

The description of sediment characteristics should be based on the results of sediment sampling and analysis conducted as per a Sampling and Analysis Plan approved by the Department of Environment and Heritage under the *Environment Protection (Sea Dumping) Act 1981*.

The chemical and physical characteristics of the material to be dredged, the spoil ground and control sites should be summarised. If elutriate, bioavailability or ecotoxological testing are undertaken, results of these analyses should also be reported. Using the framework within the NODGDM (DEH 2002), a statement as to the suitability of the sediment for unconfined ocean disposal should be made.

The description of sediment characteristics will be sufficient for resuspension modelling, to determine whether the dredge material is suitable for beach or nearshore nourishment, and weather commercial use of material is possible. The locations of differing sediment types and quality within the proposed dredge area will be identified.

Meteorological Environment and Climate

The existing meteorological environment and climate should be described in sufficient details as to identify elements that may influence the proposal. Issues to be addressed include:

- local and regional climatic conditions;
- meteorological environment; and
- topographic and development/land use factors.

Air Quality

No air quality impacts from the proposal are expected and as such, no quantitative assessment is expected to be necessary. A general description of the local air environment should be provided. As

the proposal is only expected to have minor greenhouse gas implications, these should be discussed only generally.

This should include:

- the existing air shed environment; and
- emission sources and climatic conditions that may influence air quality.

Noise and Vibration

This section should detail the existing noise and vibration environment as it relates to the project. This will include a description of the equipment and plant to be used to conduct dredging and the noise and vibration they are likely to generate and an assessment of sensitive receptors within the area.

A literature review and risk assessment on noise impacts in relation to marine mammals should be undertaken including a review of previous noise assessments undertaken for the area. The review should concentrate on those species known to be active in the study area (particularly during the proposed periods of dredge activity) and their sensitivity to the expected noise and vibration emission from the proposed dredge activities.

Should the risk assessment and the initial review of literature indicate the need for quantitative assessment, a detailed noise and vibration model should be prepared and assessed.

Cultural Heritage

This section should detail the outcomes of consultation with Traditional Owners, including details of all consultation undertaken, identified sites of significance and potential impacts.

In accordance with clause 74(5)(b) of the GBRMP Regulations 1983, the need to protect the cultural heritage values held in relation to the Marine Park by Traditional Owners or other people should be documented in the EIS.

A requirement of the *Aboriginal Cultural Heritage Act 2003* (ACHA) is that a Cultural Heritage Management Plan (CHMP) is an essential element of any EIS. As a part of the preparation of the EIS for proposed dredging at the Port of Hay Point, a CHMP should be prepared. This should involve:

- notification, as required by the ACHA, to the Chief Executive of the DNRM, the local government at Hay Point, and the registered Native Title Claimants, who are the Aboriginal Parties under the ACHA;
- endorsement of those Aboriginal Parties who respond to the notification;
- consultation with the Aboriginal Parties about their involvement in the EIS, and about outcomes;
- preparation of a report by the Aboriginal Parties and their technical advisors; and
- seeking approval of the CHMP from the Chief Executive, DNRM.

Thirty days from the date of postage of notification letters should be allowed for the Aboriginal Parties to respond. Once response is received, up to eighty-four days should be allowed for the development of the CHMP.

If no response is received from the Aboriginal Parties, then a suitable CHMP should be developed for the project that will take into account the duty of care of PCQ to Aboriginal cultural heritage.

Searches should also be conducted of all relevant heritage registers at the Commonwealth, State and local government levels. In particular, the Historic Shipwrecks Register should be searched for relevant information.

Land Use and Land Use Planning

Terrestrial land uses should be discussed, in regard to both function and planning intent. Harbour, channel, shipping and commercial uses of waterways should also be discussed. All such discussions should be limited to relevance to the proposal and potential impacts. Land based disposal implications should also be assessed.

As a minimum this section should detail the following:

- description of environmental values, including at potential land disposal sites;
- Acid Sulphate Soil investigations including the suitability of the proposed land-based disposal site, characteristics of the dredge sediments, their storage, treatment and long term management strategy in accordance with State Planning Policy 2/02;
- identification and description of sensitive environmental areas which could be directly or indirectly affected by the proposal;
- description of the current land tenure and land use in the proposal area;
- land use planning and evaluation of the suitability of the proposal with land use planning policy in terms of physical and economic attributes; and
- the location and relevant agency responsibilities for all infrastructure which could be directly or indirectly affected by the proposal.

Safety and Emergency Strategies

A brief risk assessment should be undertaken to identify issues with the dredging and maintenance of the channel. The risk assessment will be conducted in accordance with AS/NZS *Risk Management Standard* 4360:1999 and will aim to identify the key issues to be addressed in the EIS and level of mitigation required.

In accordance with clause 74(5)(h) of the GBRMP Regulations 1983, any work to which the proposed project relates, the health and safety aspects will be regarded, including the adequacy of construction should be described. In addition, arrangements for removal or decommissioning upon the expiration of permission, of the structure or any other thing that is to be built, assembled, constructed or fixed in position as a result of that use should be investigated.

Socio-economic Environment

This section should detail the existing socio-economic environment that may be affected by the Project. Issues to be addressed include:

- community infrastructure and services;
- structure of potentially affected communities in the study area;
- community profile, providing information on the following characteristics:
  - demography and family structure;
  - housing;
  - economic stability
- housing and accommodation for construction and operation workforces;

- recreational, leisure and sporting activities which may be affected in particular relating to recreational fishing;
- the character and basis of the local and regional economies; and
- future economic opportunities.

6. Description of Potential Impacts and Mitigation Measures

The analysis of impacts should cover all aspects of the physical, social and economic environment. Impacts can be:

- adverse or beneficial;
- direct or indirect;
- short or long term; and
- local or regional.

Impacts should be considered for both the dredging and spoil relocation activities, including the construction, operation and maintenance phases of the project. The local and regional cumulative effects of potential impacts should also be considered.

For each identified impact a summary of the level of actual or potential harm or benefit should be provided in an appropriate level of detail.

Information on proposed mitigation measures and design requirements to mitigate negative impacts and enhance positive impacts should be provided for the issues identified.

Section 3.01 of Schedule 4 of the EPBC Regulations requires the following information relating to relevant impacts to be provided:

- a description of the relevant impacts of the action;
- a detailed assessment of the nature and extent of the likely short term and long term relevant impacts;
- a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
- analysis of the significance of the relevant impacts;
- any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

Section 4.01 (a), (b), (c), (e) and (f) of Schedule 4 of the EPBC Regulations requires the following information relating to proposed safeguards and mitigation measures to be provided:

- a description, and an assessment of the expected or predicted effectiveness of, the mitigation measures;
- any statutory or policy basis for the mitigation measures;
- the cost of the mitigation measures;
- the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program;

- a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.

The National Shipwreck Database records the location of known wrecks and the suspected locations of undiscovered wrecks around Australia. There is the potential for previously unrecorded shipwrecks to be found along any stretch of Australian coastline and as such the proponent needs to consider potential impacts and mitigation for this eventuality and their obligations under the *Historic Shipwrecks Act 1976*.

Marine Flora and Fauna

It is anticipated that the dredging activities will occur in relatively undisturbed areas, particularly within the departure path. The consultant should undertake an assessment of the potential impacts of the project on the marine flora and fauna within the study area, in particular, increased sediment deposition resulting from dredging, dredge spoil disposal, and resuspension of spoil, and potential impacts on marine biodiversity or biological processes should be discussed. The details should include but not be limited to the following:

- Description of existing habitat (natural or otherwise) and any associated marine flora and fauna and natural systems, which may be disturbed during dredging and/or operation (both short and long term) of the project and impacts associated with increased shipping.
- Identification of flora and fauna species with a conservation status that may be impacted by the dredging or spoil relocation, including the construction, operation and maintenance of the project. Critical and potential habitat for rare and threatened flora/fauna species should also be identified.
- Identify the importance of existing habitat within the study area to marine fauna;
- Identification of potential impacts on fauna from the project construction, operation and maintenance including but not limited to:
  - destruction of habitat;
  - hazards of dredging to fauna; and
  - impacts from reduction in water quality.
- Implement strategies to mitigate identified impacts from the project on flora and fauna.
- As required by clauses 74(5)(i) and (f) of the GBRMP Regulations 1983:
  - the arrangements for making good any damage caused to the Marine Park by the proposed activity should be identified; and
  - the likely effects of the proposed use on adjoining and adjacent areas and any possible effects of the proposed use on the environment and adequacy of safeguards for the environment should described.

Turtles

Specific attention should be paid to the potential for turtles to be injured or captured through being sucked into the dredge hopper. Potential mitigation measures should be reviewed and discussed in detail.

Benthic Macroinvertebrates

In the event that a review of existing data identifies a need for impact assessment of benthic macroinvertebrate community, a baseline (i.e. before dredging) survey should be conducted. The

design of this program should have sufficient statistical rigor to identify impacts associated with sediment disposal and the importance of the migration of sediment outside the spoil ground.

Sea Floor Habitat

The effects associated with dumping of large lumps of clay and the resultant changes in the structure of the sea floor should be investigated. Particular attention should be paid to the potential fish aggregation associated with these structures.

Marine and Coastal Processes

The impacts of development of the departure path and apron areas on hydrodynamic processes within the study area should be described. This assessment should draw on the outcomes of hydrodynamic and geomorphological studies. In particular, impacts on siltation and any implications for marine flora and fauna and/or biological processes should be discussed, including generation and migration of turbid plumes.

Describe and quantify where possible the impact of creating a departure channel on coastal processes, and in particular sediment transport processes of nearby coastlines. The assessment should discuss the potential impacts associated with extreme events such as storm time and flood inundation.

Describe the potential impacts associated with the frequency of maintenance dredging requirements and the long-term use of the proposed spoil area. Include strategies to deal with the long term sustainability of depositing the spoil from maintenance dredging.

Describe the extent of potential impacts resulting from changes to the coastal processes nearby to the proposed spoil location. Detail the short and long term effects from potential changes to the local and regional wave climate, currents and sediment transport pathways. Include potential impacts from spoil mound migration, particularly in relation to the Great Barrier Reef bioregions, and potential impacts on Round and Flat Top islands, and regional coastline processes (eg. Pioneer River delta, Mackay Harbour, and south/north Mackay Beaches). This assessment should also discuss the potential impacts associated with extreme events.

Describe the impacts associated with introducing stiff clays from the capital dredging campaign to the spoil area.

Water Environment

The impacts of dredging, spoil disposal, and spoil resuspension on water quality should be assessed with particular attention to suspended solids, pH, dissolved oxygen, phosphorus and nitrogen. Strategies to limit impacts to acceptable levels shouls be stated.

In addition to the above considerations, the consultant is to undertake an assessment of the following:

- the following guidelines and standards should be considered:
  - the Environmental Protection (Water) Policy 1997, and any recent or proposed amendments that incorporate recommendations of the National Environment Protection Measures;
- ANZECC Australian Water Quality Guidelines for Fresh and Marine Waters (2000);
- amelioration or mitigation measures to address each activity identified to impact on local and regional water quality;
- any monitoring of water quality recommended during the dredging activities to ensure environmental values are protected.

- as required by clauses 75(5)(d), (f) and (j) of the GBRMP Regulations 1983:
  - the methods for conservation of the natural resources of the Marine Park;
  - the likely effects of the proposed use on adjoining and adjacent areas and any possible effects of the proposed use on the environment and adequacy of safeguards for the environment; and
  - any other requirements for ensuring the orderly and proper management of the Marine Park.

Sediment Quality

The potential impacts of sediment quality on the marine environment should be discussed. This assessment will be guided by the suitability of sediment for ocean disposal as determined by the framework outlined in the NODGDM (EA 2002).

Meteorological Environment and Climate

An assessment of the potential impacts of climatic factors on the impacts of this proposal should be made. The contribution of this project to greenhouse gas emissions should also be discussed.

Air Quality

Air quality impacts are not expected to be an issue as the only emission will be from the dredge and the project is located in a regional area.

Noise and Vibration

The following issues should be considered in determining potential noise and vibration impacts of the project on surrounding areas:

- noise and vibration as a result of dredging activities;
- the potential impact of noise from increased shipping; and
- the potential impacts of noise and vibration on marine mammals.

The EIS should give a clear commitment that blasting will not be required, or carry out a detailed risk assessment of potential impacts of blasting on marine fauna and particularly marine mammals based on using best available and proposed marine blasting technology.

Cultural Heritage

The consultant should undertake an assessment of any likely effects on sites, localities and resources of European or Indigenous cultural heritage values, including but not limited to the following:

- identifying locations of culturally significant sites within or adjacent to the path or spoil relocation sites;
- describing the significance of artefacts items or places of conservation or cultural heritage value likely to be affected by the proposal and their values at a local, regional and national level; and
- assess the impact on Native Title rights and the interests of Traditional Owners; and
- recommended means of mitigating any negative impacts on cultural heritage values and enhancing any positive impacts.

Land Use and Land Use Planning

The following issues should be considered in the EIS:

- compatibility of the proposal with surrounding land uses;

- possible impacts on surrounding land uses and human activities;
- relationship to existing planning objectives and controls for study area;
- consistency of the project with GBRMPA zoning of the affected areas;
- the following guidelines and standards should be considered:
  - the Environmental Protection (Water) Policy 1997, and any recent or proposed amendments that incorporate recommendations of the National Environment Protection Measures;
  - National Environment Protection Measure (NEPM) – Contaminated Land (1999);
  - Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (Qld EPA, 1998);
  - PCQ Port of Hay Point Land Use Strategy; and
  - State Planning Policy 2/02 – Planning and Managing Development involving Acid Sulfate Soils.

Hazard and Risk

Conduct a Preliminary Hazard Analysis (HPA) consistent with the AS/NZS *Risk Management Standard* 4360:1999. The HPA is to incorporate at least the following:

- all relevant hazards (minor and major) and current competencies in first aid management of human casualties;
- the possible frequency of potential hazards, accidents, spillages and abnormal events occurring during all stages of the project;
- hazards and risks associated with the dredge working in a operational port environment and close to local fishing areas;
- impact of moving/ removing anchorage areas during and after the construction phase of the project;
- hazards and risks associated with increased shipping;
- counter disaster and rescue procedures in the event of emergency situations;
- indication of cumulative risk levels to surrounding land uses;
- impact of reduced number of ships in anchorage areas;
- life of any identified hazards;
- all hazardous substances to be used, stored, processed or produced and the rate of usage;
- potential wildlife hazards such as sharks, crocodiles, snakes, and disease vectors;
- description of processes, type of the machinery and equipment used;
- licensing requirements and compliance with the relevant standards;
- the following guidelines and standards should be considered:
  - the Environmental Protection (Water) Policy 1997, and any recent or proposed amendments that incorporate recommendations of the National Environment Protection Measures;
  - NEPM - Contaminated Land (1999); and
  - Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (Qld EPA, 1998).
  - GBRMPA guidelines for projects in the Marine Park.

Shipping

The impact of increased shipping will be investigated, with consideration given to the following:

- ship's waste;
- ballast water;
- the introduction of exotic organisms attached to the hull of ships; and
- impact on ship queuing in port.

Socio-Economic Environment

The social and community impacts of the proposed development should be addressed as part of the EIS. Considerations should be given to the following:

- identify and describe the potential impacts on the community. The variables assessed should include, but not be limited to:
  - potential influx of workers and impacts on the local community;
  - activity by interested groups;
  - implications (real and perceived) for public health, safety and amenity as a result of the development; and
  - implications for property and retail values (perceived and probable).
- identify strategies for minimising potential adverse impacts and enhancing benefits for all issues identified by stakeholders associated with the dredging and operation of the project. This shall include the identification of project modifications to improve social well being, any data requirements for impact mitigation and strategies for community participation;
- recommendations for monitoring programs to ensure social well being is maintained;
- socio-economic impact of increased shipping efficiency.
- the use of both quantitative and qualitative social information from sources including existing reports, data and studies, as well as field observation, discussion, interviews, etc.
- impact on existing businesses and commercial activities both within the immediate study area and the wider community; and
- an assessment of likely levels of employment and income (both direct and indirect) during construction and operation.

Waste Management

This section should detail waste streams likely to be generated by the dredging and operation of the channel including:.

- spoil disposal strategy;
- the overall waste management strategy to be adopted (eg avoidance, minimisation, reuse, recycling and disposal);
- amount and characteristics of all waste likely to be generated;
- solid and liquid waste disposal requirements, proposed methods and locations for recycling or disposal;
- assessment of the potential impacts associated with waste handling (eg spills); and
- the following guidelines and standards should be considered:

- the Environmental Protection (Waste Management) Policy 2000, Environmental Protection (Waste Management) Regulation 2000 and any recent or proposed amendments that incorporate recommendations of the National Environment Protection Measures;
- NODGDM (EA, 2002); and
- EPA Waste Tracking Guideline (2000).

Matters of National Environmental Significance

The proposal by the PCQ to conduct capital dredging to create a new departure path and apron area at the Port of Hay Point, and to relocate dredged material to an ocean disposal ground within the port limits and undertake subsequent maintenance dredging, was determined to be a 'controlled action' under the EPBC Act on 7 October 2004 (EPBC 2004/1775). The controlling provisions for the proposal under the EPBC Act are Sections 12 and 15A (World Heritage), Sections 18 and 18A (Listed threatened species and communities), Sections 20 and 20A (Listed migratory species) and Sections 23 and 24A (Marine environment).

Assessment should include:

- a description of the assessment and approvals process required for the proposal under the EPBC Act;
- consideration of each of the controlling provisions under the EPBC Act, including all matters under each controlling provision that are likely to be impacted by the proposal;
- consideration of the environment (as the matter protected) when addressing issues relevant to impacts of the proposal under the GBRMP Act and the Sea Dumping Act;
- consideration of any new matter protected under the EPBC Act that is identified during the EIS assessment process;
- consideration of possible direct and indirect impacts likely to be associated with the proposal;
- a description of the details of any proposed monitoring and management arrangements to be implemented to mitigate any likely impacts on relevant matters protected under the EPBC Act; and
- consideration of the principles of ecologically sustainable development (ESD), as set out in Section 3A of the EPBC Act. ESD principles are taken into account by the Australian Government Environment Minister for the when considering whether or not to approve the proposal (Section 136 of the EPBC Act).

World Heritage

The assessment should include a description of relevant values of the Great Barrier Reef World Heritage Area (GBRWHA) known to occur in the vicinity of the proposal site; the type and characteristics of usage of the GBRWHA in the vicinity of the proposal site; the likely risks associated with the proposal in terms of potential impacts on the relevant values of the GBRWHA; the likely significance of these impacts and details of proposed monitoring, management and protection measures.

The proposed action will occur partially within the GBRMP and wholly within the GBRWHA. The action may result in one or more values of the GBRWHA being degraded or damaged. For example, dredging and spoil disposal activities may adversely impact seagrasses, coral and other benthic organisms through direct destruction during dredging, through smothering organisms in the disposal area, through the migration of sediments from the spoil ground, and through limiting light penetration due to increased turbidity.

Although not limiting the number of World Heritage values to be surveyed and considered, the following specific issues associated with the proposal should be addressed:

- a sediment testing program should be undertaken to characterise the physical and chemical characteristics of the sediment to be dredged. The program should discuss the results of the sediment testing program and confirm that the requirements of the NODGDM have been met and that the dredged material is of a standard to allow disposal within the GBRMP;
- the likely impacts on coral, seagrass and other organisms or habitats due to the mobilisation of sediments during dredging and spoil disposal. The consideration should include, as appropriate, the results of any plume modelling undertaken, natural variations occurring in the region, the likely re-suspension of seafloor sediments due to wind and wave events and the extent to which areas around and beyond the dump site may be impacted by the migration of fine sediments;
- the capacity of seagrass to colonise areas within the vicinity of the spoil grounds;
- the likely impacts on benthic communities, including consideration of whether the spoil disposal area contains unique species or habitats not widely represented in surrounding waters and the capacity of benthic communities to recover from the spoil disposal disturbances;
- the likely impact that the new departure path and apron area and altered seabed bathymetry may have on hydrodynamic processes and sediment dynamics. Relevant hydrodynamic and sediment data should be provided;
- specific monitoring, management and protection measures to minimise impacts on the values of the GBRWHA associated with the dredging and dumping activities; and
- the likely risk of the import and redistribution of exotic species/marine pests associated with the dredging and dumping activities.

Listed Threatened Species

The assessment should include a description of relevant listed threatened species and communities known to occur in the vicinity of the proposal site; the type and characteristics of the usage of the proposal area; the type and quality of the habitat utilised; the likely risks associated with the proposal in terms of potential impacts on the listed species concerned or relevant habitat on the site or surrounding area; and the likely significance of these impacts and details of proposed monitoring, management and protection measures.

Sea turtles may potentially be adversely impacted, injured or killed as a result of the proposal. Although measures are proposed to minimise the risk of impacts on turtles and other marine fauna (for example, a restriction on dredging activities between 15 October and 30 April, the fitting of turtle exclusion devices on the drag head of the dredge equipment and procedures to minimise the risk of capture of marine fauna while the suction head is off the seabed) it is possible that impacts associated with the proposal could occur. Humpback Whales may also occur occasionally in the vicinity of the port area during their migration along the Queensland coast.

Although not limiting the number of listed threatened species to be considered, the assessment should identify any impacts the proposal may have on Loggerhead (*Caretta caretta*), Flatback (*Natator depressus*), Green (*Chelonia mydas*), Leatherback (*Dermochelys coriacea*), Olive Ridley (*Lepidochelys olivacae*) and Hawksbill (*Eretmochelys imbricata*) turtle species that may occur within the study area. The assessment should also identify any potential impacts the proposal may have on the Humpback Whale (*Megaptera novaeangliae)* and other relevant cetaceans. It should also indicate the level of surveillance that will be undertaken prior to and during the dredging and

dumping activities to ensure that cetaceans are not in the vicinity of the dredging and spoil disposal areas, and that impacts will be minimised.

Listed migratory Species

The assessment should include a description of relevant listed migratory species known to occur in the vicinity of the proposal site; the type and characteristics of the usage of the proposal area; the type and quality of the habitat utilised; the likely risks associated with the proposal in terms of potential impacts on the species concerned or relevant habitat on the site or surrounding area; and the likely significance of these impacts and details of proposed monitoring, management and protection measures.

Many listed threatened turtle and whale species are also listed as migratory species under the EPBC Act. In these cases, the above comments relating to listed threatened species applies. Although not limiting the number of listed migratory species to be considered, the assessment should identify any impacts the proposal may have on Dugongs (*Dugong dugon)*.

Commonwealth Marine Area

The assessment should include a description of relevant aspects of the environment of Commonwealth marine areas in the vicinity of the proposal site; the type and characteristics of usage of these Commonwealth marine areas; the likely risks associated with the proposal in terms of potential impacts on these Commonwealth marine areas; the likely significance of these impacts and details of proposed monitoring, management arrangements and protection measures.

The proposed action will extend up to 13.3 km offshore while the seaward limit of the proposed spoil disposal site is some 10 km offshore. Given the nature and scale of the proposed activity impacts on the environment of Commonwealth marine areas may occur. The assessment should address, as appropriate, potential impacts on Indigenous, cultural, social and economic values in the Commonwealth marine environment. Representatives of traditional owners should be included in the consultation process as appropriate. In this regard, a representative of the Yuibera people has raised concerns about the impact of the proposal on seagrass communities and potential flow-on effects on the availability of marine life as a traditional food source.

The Environment

In considering impacts of the proposal relevant to the GBRMP Act and the Sea Dumping Act all relevant aspects of the environment must be assessed. Accordingly, the assessment should include a description of relevant aspects of the proposal; the likely risks associated with the proposal in terms of potential impacts on the environment; the likely significance of these impacts and details of proposed monitoring, management arrangements and protection measures.

Agreements, plans and management documents

Where appropriate the EIS should refer to relevant agreements, plans and management documents. For example:

- Relevant documents relating to the GBRWHA include:
  - *Great Barrier Reef Marine Park Authority,* 2004, *Environmental Impact Management Policy;* and
  - *Great Barrier Reef Marine Park Authority,* 2004, *Dredging and Spoil Disposal Policy.*
- Relevant documents relating to threatened species and communities include:
  - *Convention on Biological Diversity*, Rio de Janeiro, 5 June 1992;

– *Relevant Recovery Plans for listed species and ecological communities;* and
– *Relevant Key Threatening Processes.*

7. Environmental Management Plan

An Environmental Management Plan (EMP) should be provided detailing the measures to be adopted to address identified impacts during the dredging phase of the project. The EMP should detail:

- Environmental element - the environmental aspect requiring management consideration.
- Potential impacts – potential impacts identified in the EIS.
- Performance objective – the target or strategy to be achieved through management.
- Management actions – the actions to be undertaken to achieve the performance objective, including any necessary approvals, applications, and consultation.
- Performance indicators – criteria against which the implementation of the actions and the level of achievement of the performance objectives will be measured.
- Monitoring – the intended monitoring program and the process of measuring actual performance.
- Responsibility – assign responsibility for carrying out each action to a relevant person/organisation.
- Reporting – the process and responsibility for reporting monitoring results.
- Corrective action – the action to be implemented in the case of non-compliance and the person/organisation responsible for action.

The plan will be developed for the operational phase of the project and presented in the EIS.

Section 4.01 (d) of Schedule 4 of the EPBC Regulations requires the following information relating to an environmental management plan to be provided:

- an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing.

8. References

References should be presented in a consistent and recognised format.

Section 7.01 of Schedule 4 of the EPBC Regulations requires the following information relating to information sources to be provided:

- the source of the information;
- how recent the information is;
- how the reliability of the information was teste; and
- that uncertainties (if any) are in the information.

9. Environmental Record

Section 6 of Schedule 4 of the EPBC Regulations requires the following information relating to the environmental record of the person proposing to take the action to be provided:

- Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:
  - the person proposing to take the action; and
  - for an action for which a person has applied for a permit, the person making the application.
- If the person proposing to take the action is a corporation – details of the corporation's environmental policy and planning framework.

10. Recommended Appendices

Items that should be located in the Appendices may include:

- ToR;
- statutory Permits and Development Approvals;
- site Plans;
- community Consultation Report;
- project Team Qualifications and Experience;
- sampling and analysis of sediments data; and
- research Reports and Specialist studies.

Attachment 1

Great Barrier Reef Marine Park Regulations 1983

Under Section 74(5) of the Regulations, in considering an application for a relevant permission, the Great Barrier Reef Marine Park Authority must have regard to:

(a) the objective of the zone; and
(b) the need to protect the cultural and heritage values held in relation to the Marine Park by traditional owners and other people; and
(c) the likely effect of granting permission on future options for the Marine Park; and
(d) the conservation of the natural resources of the Marine Park; and
(e) the nature and scale of the proposed use in relation to the existing use and amenity, and the future or desirable use and amenity, of the relevant area and of nearby areas; and
(f) the likely effects of the proposed use on adjoining and adjacent areas and any possible effects of the proposed use on the environment and the adequacy of safeguards for the environment; and
(g) the means of transport for entry into, use within, or departure from, the zone or designated area and the adequacy of provisions for aircraft or vessel mooring, landing, taking off, parking, loading and unloading; and
(h) in relation to any structure, landing area, farming facility, vessel or work to which the proposed use relates:
(i) the health and safety aspects involved, including the adequacy of construction; and

(ii) the arrangements for removal, upon the expiration of the permission, of the structure, landing area, farming facility or vessel or any other thing that is to be built, assembled, constructed or fixed in position as a result of that use; and

(i) the arrangements for making good any damage caused to the Marine Park by the proposed activity; and

(j) any other requirements for ensuring the orderly and proper management of the Marine Park; and

(k) any charge, collected amount or penalty amount that is overdue for payment by the applicant as the holder of a chargeable permission (whether or not the permission is in force); and

(l) any late payment penalty that is payable by the applicant as the holder of a chargeable permission (whether or not the permission is in force); and

(m) if the application relates to an undeveloped project, the cost of which will be large — the capacity of the applicant to satisfactorily develop the project.