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2.0 BACKGROUND

2.1 Summary of Aquaculture Developments and Strategic Directions

The Development and strategic directions of the aquaculture industry are outlined below.

2.1.1 Summary of Aquaculture Developments in Queensland and the Region

The following is an extract from the recently released National Aquaculture Development Committees Report to Government and Industry, 2002 (Aquaculture Industry Action Agenda) it provides a good review of global and national aquaculture developments:

Global Perspective

The proteins derived from fish, crustaceans and molluscs account for between 13.8% and 16.5% of the animal protein intake of the human population. Worldwide, about 1 billion people rely on fish as their main source of animal proteins (FAO, 2000). Aquaculture is now one of the world's fastest growing food industries. Aquaculture comprises about 30% of global fisheries production. Global aquaculture production by volume is currently increasing at an annual rate of 11%. Aquaculture production is increasing in every major continent in the world. Few other global industries are enjoying the same level of growth. In 1999, there were 180 countries that produced through aquaculture practices commercial quantities of more than 350 species (FAO, 2000).

Global aquaculture production is dominated by Asian countries particularly China which comprises over 60% of total production. The top ten-aquaculture producing countries in the world are in Asia. Over half of global production is from freshwater, often as part of integrated agriculture-aquaculture food production systems. This is in contrast to Australia where over 95% of production is from saline marine waters.

The two key drivers of world seafood demand and aquaculture development have been the widening gap between wild caught production and increasing demand for high volume, low value seafood and demand for high value seafood from limited production (see Figure 2-1).

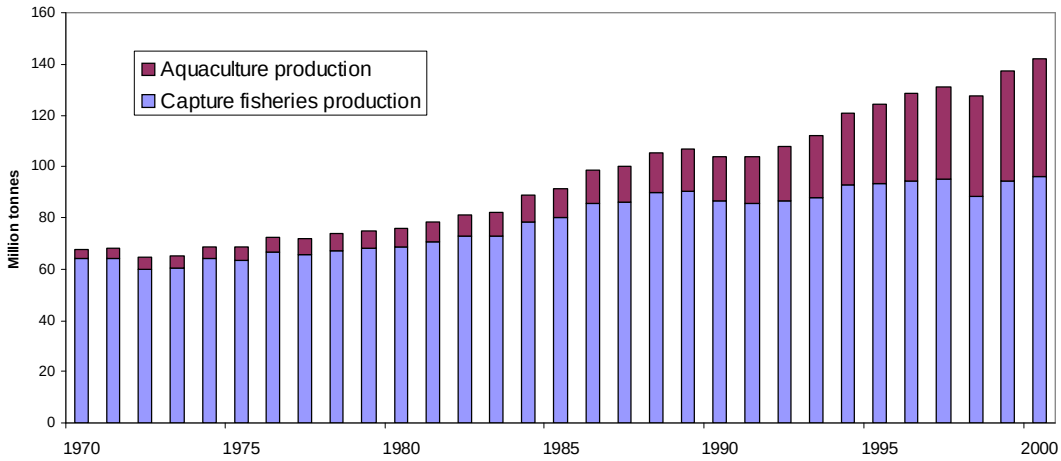

Figure 2-1
World capture fisheries and aquaculture production 1970 – 2000
(Source: FAO Statistics 1970 – 2000)

Global population, per capita meat consumption and gross domestic product are all estimated to increase over the next 10-15 years. At the same time as demand for fisheries products is increasing, wild-capture from global marine and inland fisheries has levelled.

This levelling off of the total catch follows the general trend of most of the world's fishing areas, which appear to have reached their maximum potential for capture fisheries production, with the majority of stocks being fully exploited. It is therefore very unlikely that substantial increases in total catch will be obtained. In contrast, growth in aquaculture production has shown the opposite tendency (FAO, 1999).

The Future

Fish farming will overtake cattle ranching as a food source by 2010. Aquaculture has been the fastest-growing sector of the world food economy over the past decade, while beef production has stagnated (The World Futurist Society, 2001).

Within the next fifty years fish farming may change us from hunters and gatherers on the seas into "marine pastoralists" - just as a similar innovation some 10,000 years ago changed out ancestors from hunters and gatherers on the land into agriculturists and pastoralists (Dr Peter Drucker, 2001).

By the year 2030, aquaculture will dominate fish supplies and less than half of the fish consumed is likely to originate in capture fisheries. Aquaculture will have expanded geographically, in terms of species cultured and technologies used (FAO, 1999).

For example in 1988 farmed salmon accounted for only 20% of world salmon production. In 2000 farmed salmon accounted for over half (57%) of world salmon production.

Domestic demand for seafood is increasing in Australia. In the late 1930's Australian seafood consumption was only 4.9 kilograms per person. In 1998/99, annual per capita consumption of seafood in Australia was more than double this, at 10.9 kilograms per person, or about ten per cent of total unprocessed meat intake (ABS, 2000). Unfortunately only around a third of seafood consumption (3.6 kilograms per person) was of Australian fish.

Australian National Perspective

Aquaculture is the fastest growing primary industry in Australia, increasing in value by 13% per year since 1990. In 2000/01 the gross value of Australian aquaculture production was $746 million, representing approximately 30% of Australia's fisheries production. In real terms the gross value of aquaculture production rose by 146% in the past decade, compared with a rise of 46% for the total value of fisheries production (ABARE/FRDC, 2002).

The industry directly employs over 7,000 people and indirectly over 20,000 people. Over the last four years employment in aquaculture has grown by 260%, making it the sixth fastest growing occupation in Australia and the fastest growing occupation within primary industries (Bulletin, October 2001). Over 60% of the value of Australian aquaculture is earned from exports. The aquaculture industry is largely based in regional Australia and makes a significant and positive contribution to regional development.

Aquaculture is a new global industry that is growing at an annual rate of 11%. Driving this growth has been increasing world demand for fisheries products that the world's wild fisheries are increasingly unable to meet.

To capitalise on increasing demand for aquaculture products, Australian producers need to exploit their competitive advantages such as:

- An established international reputation as a supplier of high quality food and seafood products;
- Unique native species;
- Clean environment;
- Close proximity to major Asian markets;
- Ecologically sustainable management systems and regulations; and
- Ability to farm a large variety of aquatic animals from both cold and tropical regions.

Development in Queensland

In contrast to other parts of Australia, the aquaculture industry in Queensland showed limited growth in 2000/01 over the previous year. Estimated total production was valued at $57.1 million in 2000/01, which was only marginally higher than the $55.3 million produced in 1999/00.

The marine prawn sector provided no growth during the year. Partially the result of limited availability of black tiger prawn broodstock from the wild and the drop in Kuruma prawn production by 25% partly as a result of poor Japanese market prices.

Figure 2-2 shows the growth of the Queensland aquaculture industry 1995 - 2000. (Lobegeiger 2002).

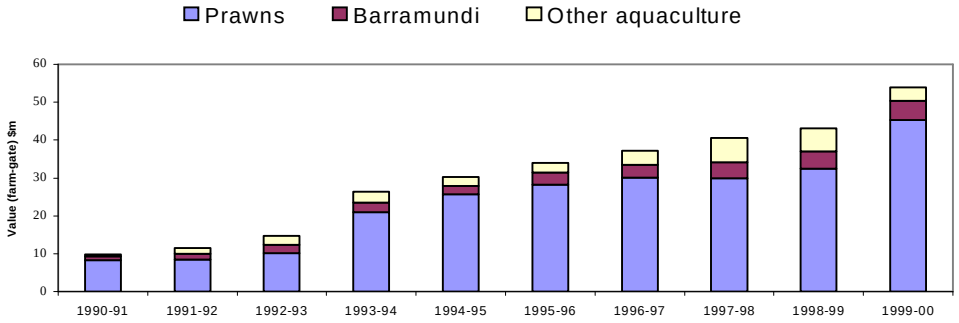

Figure 2-2
Queensland Aquaculture Production 1995 - 2000

Prawn Farming Industry Development

The annual report to farmers provides an indication of the growth of the prawn farming sector over the last 10 years (Lobegeiger 2002).

There are very few new prawn farm applications over 5 ha currently being assessed by the authorities (Pers. Comm. QDPI Dec 2002). Other than the Guthalungra proposal, there is a farm application in Upstart Bay (20 km north of Guthalungra) that recently received first stage approval and there is a farm at the southern end of the Hinchinbrook Channel that was recently sold and development of around 50 ha is proposed.

Industry estimates suggest that the 2001 – 2002 production season will see a significant increase in production from existing farms. Estimates suggest that around 2800 tonnes of tiger prawns and 900 tonnes of banana prawns may have been produced.

There appears to be limited expansion proposed by a number of existing farms. Several farms on the Logan River in South East Queensland are looking to expand. Also expansion is planned for a farm at Cardwell at the Northern end of the Hinchinbrook Channel. Pacific Reef Fisheries has an application to develop a further 30 ha at their Alva Beach farm, Ayr. A small recirculation operation was recently approved north of Townsville and investors intend to develop an existing farm also north of Townsville.

An optimistic estimate of short-term industry expansion excluding the Guthalungra proposal would be in the region of 150 - 200 hectares of production ponds over the next two to three years.

Therefore it is forecast that the Queensland prawn sector will continue to grow at an average rate of 10% per annum over the next 5 years, the same rate that has been experienced over the last 5 years.

Regional Aquaculture Developments

There are four aquaculture operations either in train or in operation in the Bowen region.

Currently there is only one operational prawn venture in place in the Bowen region. This is based at the Gregory River, just over the shire boundary in Whitsunday Shire and has 100ha of prawn ponds in place.

An application for a prawn farm north of the Guthalungra site has had the first stage of the operation approved. This farm is located adjacent to Upstart Bay in the vicinity of Wilsons and Rocky Ponds Creek. The application is for 100 ha of production ponds and the first stage of development is 50 ha of ponds.

A failed aquaculture facility located at the southern end of Abbott Bay has been purchased and there is an intention to farm around 30ha of prawns pending approval. This farm was established to produce tropical reef fish. Substantial equity was raised for the establishment of the operation however the technologies to produce the target species have yet to be established and the production staff were unable to produce commercial quantities of stock. The commercial growout of all species is currently pending approval.

The fourth operation is proposed south of Bowen. Applicants intend to culture a combination of crabs and marine fish utilising water recirculation and production technologies that have been developed by the company.

2.1.2 Strategic Directions for the Industry

Government Initiatives

Local Government - Bowen Collinsville Enterprise Group Inc

The Bowen Collinsville Enterprise Group (BCE) has been very active in trying to establish an aquaculture industry in the region. There has been substantial interest in the establishment of an aquaculture industry in the region for some years.

The Dry Tropics Agriculture Group (DTAG) and subsequently the Dry Tropics Aquaculture Advisory Group (DTAAG) commissioned assessments of the region to identify potential locations for aquaculture ventures. DTAAG identified funding to undertake the Burdekin Broadsound Aquaculture Area Identification Study (Pacific Aquaculture and Environment, 1998).

This identified a number of areas in the region that may be suitable for aquaculture using high-level selection parameters. This study was then followed by a more detailed assessment of a small number of target areas (Bowen Collinsville Enterprise Group, 2002a).

Queensland Department of State Development in association with the Bowen Shire Council have undertaken a detailed assessment of community perceptions towards aquaculture in the region (Deborah Wilson Consulting Services, 2001). State Development has established a GIS database to assist investors identify appropriate sites for aquaculture in the State.

The Bowen Shire Council through Bowen Collinsville Enterprise plans further Aquaculture industry development projects in association with the Department of State Development. These development projects include:

- The preparation of a regional Aquaculture Industry Development Plan;
- On site detailed investigation of four previously identified aquaculture sites;
- The preparation of an aquaculture plan that can be incorporated into Bowen Shires Planning Scheme;
- Investigations of further aquaculture opportunities for the region;
- A training needs analysis of the region; and
- A series of projects to enhance community awareness of and understanding of aquaculture.

Queensland State Government

The State Government has maintained a keen interest in the development of an aquaculture industry in Queensland for a number of years. As a result, a variety of initiatives have been initiated and planning undertaken. In 1997, the State Aquaculture Development Strategy was released. More recently the Queensland Food and Fibre Science and Innovation Committee established a taskforce to investigate the development potential of aquaculture in Queensland (Knibb *et al.,* 2001). At the same time, Cabinet established the Queensland Department of State Development as the Government lead agency for aquaculture industry development. As a result a variety of reference and advisory committees have been established including:

- The Interdepartmental Aquaculture Committee;
- The Aquaculture Advisory Group; and
- The Aquaculture Taskforce.

The Department of State Development recently drafted a State Aquaculture Policy for public consideration.

The Department of Primary Industries continues to support the aquaculture industry in a number of ways and invests heavily in research through its three dedicated aquaculture research stations. The latest major investment in research infrastructure is an $8.2 million upgrade of the Northern Fisheries Centre facilities for marine aquaculture research.

The Queensland Department of Primary Industries undertook an extensive strategic planning project for the fishing and aquaculture industries. The 2000 foresighting project prepared development scenarios for aquaculture.

The Australian prawn farming industry through the Australian Prawn Farmers Association is developing a comprehensive Industry Development Plan and regularly updates the Prawn Industry Research Plan (www.apfa.com.au).

Federal Government

The National Aquaculture Industry Action Agenda was launched recently (December 2002). In support of the initiative, the National Aquaculture Development Committee's Report to Government and Industry 2002 outline the following initiatives that would be undertaken as part of the Action Agenda:

- A national aquaculture policy statement;
- Implementing an industry driven action agenda;
- Growing the industry within an ecologically sustainable framework;
- An investment strategy for growth;
- Promoting aquaculture products at home and internationally;
- Meeting the research and development challenge; and
- Making the most of education and training opportunities.

Other Federal strategic documents include:

- National Aquaculture Strategy 1994; and
- Revised National Aquaculture Strategy 1998.

2.2 Legislative Requirements and Project Approvals

The following material is also presented in Sections 1.5 and 1.6 in the introduction.

2.2.1 Overview

The EIS process for the project was managed by the Department of State Development under Part 4 of the *State Development and Public Works Act 1971* (SDPWO Act). The responsibility for the co-ordination of input from local and state government agencies therefore lies with the Coordinator General.

For the project to proceed, a range of approvals and licences will be required following consideration of the EIS by the Coordinator General. These are dealt with under the Integrated Development Assessment System (IDAS) as established by the *Integrated Planning Act 1997* (IPA).

A full list of licenses, permits and other approvals required for the project is provided in Section 2.4 - Current Status and Approvals Required.

2.2.2 Queensland Policies and Legislation

2.2.2.1 Introduction

This EIS has been prepared in accordance with the provisions of Part 4 of the *State Development and Public Works Act 1971* (SDPWO Act). This EIS will be used to support applications for licences and approvals from the various government agencies through their relevant legislation. Major state legislative instruments under which approvals are required for either the construction or operation of a marine prawn farm include:

- Integrated Planning Act 1997;
- Environment Protection Act 1994;
- Nature Conservation Act 1992;
- Fisheries Act 1994;
- Harbours Act 1955;
- Water Act 2000;
- Lands Act 1994; and
- Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987.

2.2.2.2 Integrated Planning Act 1997

The purpose of the *Integrated Planning Act 1997* (IPA) is to seek to achieve ecological sustainability through co-ordinating and integrating planning, and managing the process of development and the effects of development upon the environment.

IPA provides for the Integrated Development Assessment System (IDAS). Under this system certain aspects of a proposal can be assessed and given approval by the State or the relevant local authority (the Assessment Manager).

A project requires an approval to be granted under IPA if it involves "development" defined in the Act as:

- Carrying out building work;
- Carrying out plumbing or drainage work;
- Carrying out operational work;
- Reconfiguring a lot; or
- Making a material change of use.

Under IPA, Pacific Reef Fisheries (Bowen) may submit Development Applications to Bowen Shire Council (the Assessment Manager) seeking a permit for a material change of use for Lot 370 and Lot 8 as they currently have approval for rural grazing.

In considering the development applications, the Shire must take account of the Co-ordinator Generals report (which is a concurrence agency response under IPA). The Co-ordinator General's report may also contain conditions which attach to any permit. Bowen Shire Council would then make a decision regarding the application. If the application is approved, it will be subject to the conditions of the Coordinator's General's report, and other conditions as deemed appropriate by the Assessment Manager.

Submissions made to the Coordinator General about the EIS during the submission period will be taken to be properly made submissions for a Development Application under IPA. Appeals on the decision about the application may be heard in the Planning and Environment Court.

Any "Material Change of Use" may trigger an IDAS application. The use of Lot 370 and Lot 8 will need to be approved by Bowen Shire Council as they currently only have approval for rural grazing.

IPA defines *impact assessment* as:

The assessment of:

- "The environmental effects of proposed development; and
- The ways of dealing with the effects."

Being an impact assessable development, a development permit is required for *material change of use*. Under s.1.3.5 of IPA, a material change of use means:

- The start of a new use of the land or building; or
- The re-establishment on the building or land of a use that has been abandoned; or
- The material change in the intensity or scale of the use of the building or land.

2.2.2.3 Environment Protection Act 1994

Introduction

"The objective of the *Environment Protection Act 1994* (Sect 3) is to "Protect the Queensland environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends".

Importantly the act defines the need for an environmental evaluation to be undertaken for any significant development likely to impact on the environment. The act also sets out the requirement for an Environmental Management Plan and establishes rules for defining environmentally harmful impacts and the need for mitigating measures and performance criteria to monitor the success of limiting the effects of adverse impacts.

Environmental Duties

Pursuant to Section 36, Pacific Reef Fisheries must not carry out any activities that cause, or are likely to cause, environmental harm unless it takes all reasonable and practicable measures to prevent them.

Environmentally Relevant Activity (ERA)

The *Environment Protection Act 1994* (EP Act) requires Environmentally Relevant Activities (ERA's) to be authorised by an Administering Authority. Schedule 1 of the *Environmental Protection (Interim) Regulation 1998* lists all ERA's. Level 1 ERA's require a licence, while Level 2 ERA's require and approval. Licences and approvals are called 'Environmental Authorities'. An application can be made for an Environmental Authority with or without development approvals.

The Guthalungra Prawn Farm has the following level 1 ERA:

- Aquacultural Activity - Cultivating or holding marine, estuarine or freshwater organisms in ponds or tanks (e) if the total area of the impoundments is 20 ha or more and wastes are released to waters.

- Seafood Processing – Commercially processing seafood including removing the scales, gills, intestines or shells, filleting, chilling, freezing, or packaging seafood in works having a design production capacity of more than 100 tonnes/year.

There may be ancillary activities to the primary activity such as motor vehicle workshop (for farm equipment maintenance purposes) and storage of petroleum products. Also dredging, fuel storage and contractors engaged in construction may need to secure a licence under the EP Act.

Notifiable activities

Pursuant to Section 118E of the EPA, if the owner or occupier of land becomes aware that a notifiable activity is being carried out on its land or an activity is being carried out that can cause contamination of the land, it must give notice to the administering authority.

Environmental Protection Policies

The EP Act gives the Minister the power to prepare policies to enhance or protect Queensland's environment. Environmental Protection Policies that have been prepared include:

Environment Protection (Noise) Policy 1997

The purpose of this policy is to protect the quality of Queensland's acoustic sound environment. The EPP achieves this by:

- Identifying the environmental values that need to be protected;
- Setting noise management goals;
- Promoting good environmental management;
- Educating the community about noise management; and
- Implementing a flexible yet defined process for noise control.

Environment Protection Air Policy 1997

The purpose of this policy is to achieve the objectives of the EP Act in relation to Queensland's air environment by:

- Identifying environmental values that need to be enhanced or protected;
- Specifying air quality indicators and goals to protect environmental values;
- Providing a framework for making consistent and fair decisions about the management of the air environment;
- Involving the community to achieve air quality goals that best protect Queensland's air environment;
- Providing a framework for making consistent and fair decisions about the management of the air environment; and
- Involving the community to achieve air quality goals that best protect Queensland's air environment.

Environment Protection (Water) Policy 1997

The purpose of this policy is to achieve ecologically sustainable development in relation to Queensland waters. It sets a framework for management of environmental impacts on water and the identification of environmental values and the guidelines needed to protect the water environment.

The Australian Water Quality Guideline is an example of a guideline which may be used to assess water quality in the existing environment, and assist in the setting of environmental values and water quality objectives.

Water management conditions can be included in the conditions of the licence.

Environment Protection (Waste) Policy 2000

The policy provides a strategic framework for managing waste in Queensland. The Regulations provides the requirements for handling of specific waste items. The policy outlines the preferred waste management hierarchy and principles for achieving good waste management.

The Waste EPP is based on principals of:

- Polluter pays: all costs associated with waste management should be borne by the waste generator;
- User pays; all costs associated with the use of a resource should be include in the price of the goods and services developed from that resource; and
- Product stewardship the producer or importer of a product should take all reasonable steps to minimise the environmental harm from the production use and disposal of the product.

Integrated Environmental Management System

Under the *Environmental Protection Regulations 1998* applicants for licences to carry out more than one ERA at a site must include an Integrated Environmental Management System (IEMS) (clause 42). The purpose of the IEMS is to set out the means by which the proponent will ensure that licence conditions will be met.

The IEMS must include the means by which the proponent will achieve the following:

- Monitoring of releases of contaminants into the environment;
- Environmental assessment of the releases;
- Staff training and awareness of environmental issues;
- Conduct of environmental energy audits;
- Waste prevention treatment and disposal;
- A program for continuous improvement; and
- Reporting arrangements on the effectiveness of the environmental management of the activities (*Environmental Protection Regulations 42(2)).*

General Environmental Duty

Section 36 of the *Environment Protection Act 1994* establishes a duty for a person to take all reasonable and practicable measures for protecting the environment from harm when caring out an activity that causes, or is likely to cause environmental harm. The general environmental duty places a clear onus on major developers to implement measures for preventing environmental harm.

2.2.2.4 Coastal Protection and Management Act 1995

Proposed changes to the *Coastal Protection and Management Act 1995* and the *Integrated Planning Act 1997* through the *Coastal Protection and Management and other Legislation Amendment Act 2001* will result in the incorporation of the development assessment provisions under the *Harbours Act 1955* and the *Beach Protection Act 1968* into the Integrated Development Assessment System (IDAS).

2.2.2.5 Beach Protection Act 1968

The Beach Protection Authority is a statutory authority that manages erosion prone areas, declared over areas where special development controls are required. If a development occurs in an Erosion Prone Area, then approval of any clearing of vegetation or earthworks on freehold land can be granted under section (47)(2) of the *Beach Protection Act 1968*. Any disturbance of earth on Unoccupied Crown Land will require a submission, consultation and approval with the Beach Protection Authority. The project intends to take water from Abbot Bay via a buried pipeline therefore approval under the *Beach Protection Act 1968* will be required.

Should the plan to intake waters from the delta proceed, a written submission to the Beach Protection Authority will be made to obtain advice on whether the subject land falls within an erosion prone area and to seek formal approval.

2.2.2.6 Fisheries Act 1994

The objective of the *Fisheries Act 1994* is to maintain sustainable fish resources in Queensland waters. Values and links between fish and their habitats are recognised and protected through measures such as the declaration of Fish Habitat Areas and the protection of marine plants. A Fish Habitat Area has been declared in Upstart Bay. Declared Fish Habitat Areas can exist up to the high water level, including within estuaries. The legislation also allows for the granting of approvals for works in declared fish habitat areas. This approval is contingent upon potential impacts being minimised, the works are for fisheries purposes and community benefit and mitigation is undertaken to counter loss of fisheries habitat values.

“Marine plants are defined as any plant on tidal land, or plant material that usually grows on, or adjacent to, tidal land, whether it is living, dead, standing or fallen. Whilst the *Fisheries Act* does not specifically identify plant species that are encompassed by this definition, mangroves, seagrass, algae, saltwater couch, saltpan succulents, Melaleuca in adjacent swamps etc comprise typical marine plant communities. Tidal land in this definition includes all land up to an including the level of Highest Astronomical Tide (Fisheries Habitat Information Booklet, DPI 1997)”.

Under section 123 of the *Fisheries Act 1994*, all marine plants are protected regardless of land tenure. Any proposed removal or destruction of marine plant species or any impact on the integrity of a fisheries resource will require the proposal to be forwarded to the Department of Primary Industries (Fisheries) for consideration. This will apply to any marine plant on the freehold property, as well as any marine plant disturbed on other land.

2.2.2.7 Harbours Act 1955

The *Harbours Act 1955* is soon to be repealed with sections transitional under *Coastal Protection and Management Act 1995*. Applications and approvals are administered by the Environmental Protection Agency. The *Harbours Act 1955* provides for management of issues such as the safe navigation of coastal waters and development approvals for works below high water mark. Section 86 requires that approval must be granted for works on tidal lands or waters for infrastructure such as an intake pipe sited in Queensland waters.

2.2.2.8 Water Act 2000

If any construction of a development is likely to occur in a watercourse (including a lake, water body or a stream or creek), a permit will need to be issued from the Department of Natural Resources under the *Water Act 2000.* A permit will be required for extraction and use of surface water from a watercourse and use of groundwater in a declared groundwater area.

2.2.2.9 Lands Act 1994

Any future development such as installation of a pipeline to service a seawater off-take would probably require burying such a pipeline to maintain the current use of the land (for grazing). An application will be made to the Department of Natural Resources (Lands Division), to seek consent and granting of a permit to occupy for the pump housing and pipeline infrastructure on Crown land, if the option to use an intake is required.

2.2.2.10 Cultural Record (Landscapes Qld and Qld Estate) Act 1987

Any item, record or relic encountered will be managed in accordance with legislative requirements. It is not anticipated that such material will be disturbed during approved construction works on the land parcel. Should they need to be, they will be managed and reported to EPA, Townsville.

2.2.3 Commonwealth Legislation

2.2.3.1 Commonwealth World Heritage Properties Act

The Marine Park in the waters adjacent to Lot 135 NPW463 and Lot 26 SB441 is located within the Central Section of the Marine Park. The Central Section Zoning Plan defines this area as General use 'A'.

The World Heritage Properties Act also gives powers to the Commonwealth to regulate activities which affect world heritage values in the world heritage area. Section (66)(2) gives the Commonwealth powers to intervene in land-based activities under circumstances where there may be risk to the adjacent world heritage values.

It appears that no other specific approval will be required for the planned development under this legislation, although any risk to world heritage values should be considered.

2.2.3.2 Environmental Protection and Biodiversity Conservation Act 1999

Under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), actions that have, or are likely to have, a significant impact on a matter of national environmental significance (i.e. are deemed to be controlled actions) require approval from the Commonwealth Environment Minister.

Matters of environmental significance identified in the EPBC Act which are triggers for Commonwealth assessment and approval are:

- World Heritage Properties;
- Ramsar Wetlands of international importance;
- Nationally threatened species and communities;
- Migratory species protected under international agreements;
- Nuclear actions, including uranium mining; and
- The Commonwealth marine and land environment.

Approval is also required for actions that are likely to have significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land) and actions taken by the Commonwealth that will have a significant impact on the environment anywhere in the world.

The proposed action to develop and operate an aquaculture farm comprising approximately 250 hectares of prawn growout ponds, a seafood processing facility and associated facilities at Guthalungra, North Queensland was declared a Controlled Action under Section 75 of the Act, on 29 January 2001 (EPBC 2001/138). The controlling provisions of the EPBC Act being:

- 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).

Under s.87 of the EPBC Act, the Commonwealth Environment Minister has decided that assessment of the relevant impact on the controlling provisions will be by accredited assessment process. This is in recognition from the Commonwealth Environment Minister that the state impact assessment process addresses the Commonwealth Governments needs of impact assessment.

To accommodate this accreditation process, Part 5 of the Queensland SDPWO Regulation provides additional requirements for an EIS to address Commonwealth Government requirements under the *Environmental Protection and Biodiversity Conservation Act 1999*. The SDPWO regulation states requirements for an EIS in circumstances where the Co-ordinator General has declared a project significant, and the Commonwealth Minister for the Environment has decided that the appropriate assessment approach for the assessment of relevant impacts is by accredited assessment.

2.2.3.3 Great Barrier Reef Marine Park Authority

It is recognised that Environment Australia will be the Commonwealth Agency responsible for the assessment of the project with respect to matters of national environmental significance, however the project will require a Marine Parks Permit for any structures proposed to be located within the Great Barrier Reef Marine Park.

An application for a Maine Parks Permit will be assessed under the *Great Barrier Reef Marine Park Regulations 1993*.

2.2.3.4 Coordination of State and Commonwealth Planning Approval Processes

It is desirous to run a single, coordinated process to seek assessment and approvals under both State and Commonwealth legislation. Presently, the State and the Commonwealth are deciding how their respective legislation can be integrated, with the aim being that specific State planning and operational instruments and approvals can be 'accredited' by the Commonwealth. Until that 'accreditation' is granted, separate State and Commonwealth applications and assessment processes will be required. However, the proponent is interested to amalgamate the requirements of the State and Commonwealth to eliminate potential for duplication during the EIS phase.

2.2.4 Existing Approvals

The only approval currently held that relates to the Guthalungra prawn farm proposal is the approval to undertake a cultural heritage under the *Queensland Cultural Records (Landscape Qld and Queensland Records) Act 1987.*

2.3 Preliminary Planning Design and On-Site Works

Prior to the preparation of the EIS and the Initial Advice Statement (Lambert and Rehbein, 2001) there had been no detailed planning or design work undertaken nor had any applications been lodged or approvals issued for works on the Guthalungra prawn farm site.

2.4 Current Status of the Project

2.4.1 Current Status

The legislative requirements of the proposal are outlined in Sections 1.0 - Introduction and Section 2.3 - Legislative Requirements and Existing Approvals. The approvals required in relation to that legislation are listed below. The EIS has been undertaken under the provisions of Part 4 of the *State Development and Public Works Act 1971* (SDPWO Act). As such the relevant agencies have had appropriate input to the Terms of Reference for the EIS. Therefore the information requirements of the various approvals have been incorporated into the Terms of Reference for the EIS. Despite the information having been provided in the EIS separate applications will have to be submitted for a variety of approvals as listed below.

2.4.2 Approvals Required

Approvals required for the project are discussed below.

2.4.2.1 DNRM - Permit to Occupy (Form 104), *Lands Act 1994*

For access across State Land the following Permits to Occupy will be required:

- The pump well located within the boundary of the road reserve at the intersection of the road reserve and the esplanade:
  - Location of the facility refer to Section 4.1;
  - Description of the facility refer to Section 4.1, 4.2 and 4.3 Appendix B;
  - Impact of the construction of the facility refer to Section 7.3;
  - Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
  - Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.4, 7.3 and 7.6.

- The buried pipelines across the salt pan on Special Lease 43315 Lot 55:

  - Location of the facility refer to Section 4.1;
  - Description of the facility refer to Section 4.1, 4.2 and 4.3 Appendix B;
  - Impact of the construction of the facility refer to Section 7.3;
  - Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
  - Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1 and 4.2.

- The buried pipelines across the beach leading from the pump well to the intake and discharge points offshore:

  - Location of the facility refer to Section 4.1;
  - Description of the facility refer to Section 4.1, 4.2 and 4.3 Appendix B;
  - Impact of the construction of the facility refer to Section 7.3;
  - Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
  - Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1 and 4.2.

- The track constructed adjacent to the buried pipeline along road reserve from Coventry road to the pump-well:

  - Location of the facility refer to Section 4.1;
  - Description of the facility refer to Section 4.1, 4.2 and 4.3 Appendix B;
  - Impact of the construction of the facility refer to Section 7.3;
  - Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
  - Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1 and 4.2.

2.4.2.2 DNRM – Registered Easements (Form 20), *Land Title Act 1994*

A Registered Easement will be required over Special Lease 43314, Lot 55 SB638 (Refer to Figure 1-7 and 4-1). A letter of agreement from the leaseholder has been obtained and will be provided with an application to DNRM.

2.4.2.3 DNRM – Vegetation Clearing, *Vegetation Management Act 1999 and Integrated Planning Act 1997*

Vegetation clearing will occur on Lot 8 which is freehold land, in this case an application will be assessable under Section 8 of IPA. The pipeline to the ocean and associated access road will be located on State land (road areas) and leasehold land (Saltpan Lot 55 SB 638 USL 46724) will require a Tree Clearing Permit pursuant to the vegetation Management Act 1999. The information required by DNRM to assess an application for clearing on leasehold land is included in the following sections:

- The location of the area, refer to Section 6.5 and 7.3;
- Description of the vegetation proposed to be cleared, refer to Section 7.3;
- Location, extent and description of any existing land degradation on the property, refer to Section 6.5;
- Action proposed to prevent land degradation refer to Section 4.3;
- Location, extent and description of any remnant vegetation remaining on the property after the proposed clearing, refer to Section 6.5 and 7.3;
- Proposed rehabilitation restoration of vegetation on the property, refer to Section 7.2.

2.4.2.4 Bowen Shire Council - Approval to Lay Pipelines on Road Areas, *Local Government Act 1993*

Bowen Shire Council has the authority to allow pipelines to be laid in road areas. It is proposed that pipelines would be laid in the road reserves located in figure 1-7. The information required for Council to assess this activity is included in the following sections:

- Location of the facility refer to Section 4.1;
- Description of the facility refer to Sections 4.1, 4.2, and 4.3 Appendix B;
- Impact of the construction of the facility refer to Section 7.3;
- Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
- Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1, 4.2, and 4.5.

2.4.2.5 Bowen Shire Council – Development Approval, Material Change of Use, Operational Works, *Integrated Planning Act 1997*

Bowen Shire Council will issue Development Approval. The information provided in the EIS will be used to support an application for the material change of land use to from rural grazing to enable aquaculture activities to occur.

The information required for the development application is provided throughout the EIS.

For example information related to the material change of use of premises is included in the following sections:

- Concept Design Information refer to Section 4.1 & Appendix B
- Number of employees refer to Section 7.10
- Operational works refer to Section 4.5

Sewage and Water Supply Act

Water supply services refer to Section 4.1.
Onsite sewage and water treatment procedures are detailed in Section 4.1 and 4.5

2.4.2.6 EPA – Integrated Authority for Environmentally Relevant Activities, *Environmental Protection Act 1994, Integrated Planning Act 1997*

The Environmentally Relevant Activities undertaken at Guthalungra will be approved through an environmental authority issued as part of the development conditions placed on the site. Numerous sections of the EIS relate specifically to the information requirements of the EPA.

Level 1: Aquaculture – ERA 1

The Guthalungra proposal triggers the requirement for a Level 1 Aquaculture ERA
The EIS provides relevant information throughout the document, in particular refer to:

- A description of the existing environment, refer to Section 6.0;
- Distances to dam, bore etc on adjoining land, refer to Section 6.3;
- Details of flammable and Combustible materials, chemical or other hazardous materials stored on the land, refer to Sections 4.5 and 9.0;
- Details of the location of any acid sulphate soils, refer to Section 6.3;
- Details of activities and impacts on air and noise refer to Section 6.7, 7.4

- Description of the activity refer to Section 4;
- Details of stormwater generation and disposal, refer to Section 4.1, 7.1;
- Details of waste produced, refer to Section 4.2 and 7.1;
- Details of contaminant releases, refer to Section 4.5 and 7.1 – 7.3;
- Details of operating hours, refer to Section 4.5;
- Details of business trading name, refer to Section 1.1.

Level 1: Dredging - ERA 19

Dredging will be required to construct and lay the intake and discharge pipelines offshore.

The information required to assess the application for this activity is located in various sections of the EIS including the following sections:

- The location of the area and the site, and surrounding environment refer to Section 4.1, 6.
- Location, extent and description of dredging, refer to Section 4.3;
- Details of spoil disposal refer to Section 4.3;
- Description of impacts on wildlife and measures to reduce the impacts refer to Section 6.5 and 7.3;
- Proposed rehabilitation and restoration, refer to Section 4.3

Level 1: Sewage Treatment - ERA 15(a) and (h)

Sewage treatment will be required for the accommodation and staff facilities located on site.

The information required to assess the application for this activity is located in various sections of the EIS including the following sections:

- The location of the area and the site, and surrounding environment refer to Section 6;
- Location, capacity and description of sewage facility, refer to Section 4.1, 4.5;
- Persons responsible for operation and maintenance, refer to section 1.3, 4.4;
- Description of effluent, refer to Section 4.1, 4.5
- Impacts on air, noise and water, refer to Section 6.7, 7.4

Level 1 Seafood Processing – ERA

More than 100 tonnes of product will be processed on – site. The information required to assess the application for this activity is located in the following sections:

- The location of the area and the site, and surrounding environment refer to Section 6;
- Location, extent and description of the processing activities, refer to Section 4.1, 4.5;
- Details of waste treatment and disposal refer to Section 4.3;
- Description of impacts on wildlife and measures to reduce the impacts refer to Section 7.

Level 2 Crude Oil or Petroleum Storing – ERA (Administering Authority, Bowen Shire Council).

Storing crude oil or a petroleum product in tanks or containers having a combined tital storage capacity of 10,000 litres or more but less than 500,000 litres triggers a level 2 ERA. Over 10,000 litres of diesel and petrol will be located on site therefore an Authority will be required. Relevant information is located in the following sections:

- The location of the site, and surrounding environment refer to Section 6 and plans in Appendix B;
- Location, extent and description of the storage activities, refer to Section 4.5;

Other approvals not included in the IDAS process that come under the jurisdiction of the EPA and that require a separate permit includes:

An application for sanction pursuant to **section 86 of the Harbours Act 1955** to construct works on tidal lands or waters is required. This will apply to the offshore pipelines and the pipeline construction across the saltpan. The information required by the Coastal Protection Branch of the EPA to assess the application is contained in several sections of the EIS including:

- Location of the facility refer to Section 4.1 and 6;
- Description of the facility refer to Sections 4.1 - 4.5, Appendix B;
- Impact of the construction of the facility refer to Section 7.3;
- Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
- Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4 and 7.

An application for sanction pursuant to **section 47 (1A) of the Beach Protection Act 1968** for activities on unoccupied Crown Land in a Coastal Management Control District or in an erosion prone area. This will apply to the construction and laying of the pipelines through the foreshore and dunes and the construction and operation of the pump station. The information required by the Coastal Protection Branch of the EPA to assess the application is contained in several sections of the EIS including:

- Location of the facility refer to Section 4.1 and 6;
- Description of the facility refer to Sections 4.1 - 4.5, Appendix B;
- Impact of the construction of the facility refer to Section 7.3;
- Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
- Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4 and 7.

2.4.2.7 QDPI - Fisheries Act 1994

Aquaculture Licence: The *Fisheries Act 1994* requires that aquaculture projects hold permits from the Department of Primary Industries. Fisheries permit requirements will eventually become integrated into the development approvals process through IDAS. The permit issued by QDPI covers the operation of the aquaculture facility, including facility design, disease management and habitat protection. Information related to these requirements is found throughout the EIS.

Marine Plants Permit: An application for a permit to remove, destroy or damage marine plants will be required. This permit is not incorporated into the IDAS process. The margins of the saltpan and the seafloor beneath the submerged pipeline will be the areas affected.

The information required by Queensland Fisheries Service to assess the application is contained in several sections of the EIS including:

- Location of the facility refer to Section 4.1;
- Description of the facility refer to Sections 4.1, 4.2 and 4.3, Appendix B;
- Impact of the construction of the facility refer to Section 7.3;
- Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
- Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1 and 4.2.

2.4.2.8 GBRMPA – Marine Parks Permit, *Great Barrier Reef Marine Park Regulations 1993*

The Guthalungra project intends to intake and release discharge waters into the Great Barrier Reef Marine Park around 500m offshore. Pipelines and diffusers will be placed offshore therefore a Marine Parks permit is required. The information required by GBRMPA to assess the application is contained in several sections of the EIS including:

- Location of the facility refer to Section 4.1;
- Description of the facility refer to Sections 4.1, 4.2 and 4.3, Appendix B;
- Impact of the construction of the facility refer to Section 7.3;
- Impact of the operation of the facility refer to Sections 7.3 and 7.4; and
- Ongoing impact mitigation, maintenance and management of the facility refer to Sections 4.1 and 4.2.

2.4.2.9 Environment Australia – EPBC Act 1999

The following controlling provisions under the EPBC Act 1999 are addressed in various sections of the EIS:

- Sections 12 and 15A (World heritage), refer to Section 6.6;
- Sections 18 and 18A (Listed threatened species and communities) refer to Section 6.5;
- Sections 20 and 20A (Listed migratory species) refer to Section 6.5; and
- Sections 23 and 24A (Marine environment) refer to Section 6.5.