EXECUTIVE SUMMARY

The integrated Townsville Ocean Terminal Project (TOT Project) is a Project of State significance.

It has the following parts:

- TOT Precinct;
- The Breakwater Cove Precinct; and
- Material extraction and transport during construction;
- together with being located in close proximity to the Port of Townsville and the Jupiters Casino complex.

The TOT Project:

- Will deliver major economic and social benefits to North Queensland and the State well into the future;
- Is compatible with the existing and future development and operations of the Port of Townsville, which are to be protected through Port Protection Measures (PPM);
- Will not be adversely affected by noise and air emissions from existing and future port operations, with appropriate mitigation measures;
- Does not generate long term adverse traffic impacts on the Townsville road network;
- Does not adversely disturb the marine environment; and
- Does not disturb areas of indigenous cultural heritage significance;
- With implementation of the recommended mitigation measures identified through the EIS will ensure that the long-term economic and social benefits of the TOT can be realised without undue risk to environmental, social and cultural values of the TOT Project area, Townsville and the North Queensland environs.

The TOT Precinct, developed by the Proponent and to be operated by Townsville Port Authority, delivers:

- An important infrastructure requirement of the blueprint for cruise tourism development in the State – in the State's *Cruise Shipping Plan 2003*;
- Estimated economic impacts of up to $4.7 million in value added each year into the North Queensland economy;
- 55 full-time equivalent jobs subsequent to completion, to complement the 1,900 full-time equivalent jobs expected to be created during the construction of the TOT Project; and
- A catalyst to growth in marine-based industries including eco-cruise tourism in the region.

The Breakwater Cove Precinct delivers:

- 700 ocean-front marina residential/multi dwellings, which will further enhance Townsville's reputation as a desirable residential destination and expand on its enviable reputation as a relaxed and confident city;
- 460 private and marina berths, which meet an evident need for such facilities in Queensland;
- 10 dedicated super yacht berths, which will strengthen Townsville's maritime credentials and global reputation in this rapidly growing sector;
- Public open space amenities, including fishing piers, to complement The Strand Precinct; and
- Retail and restaurant offerings for residents and visitors.

The Ocean Terminal is only possible and feasible as part of an overall TOT Project that includes the Breakwater Cove Precinct.

The TOT Project delivers significant outcomes consistent with the State's key directional priorities. In particular the TOT Project:

- Improves health care and strengthens services to the community through fostering active and healthy lifestyles;
- Realises the Smart State through adoption of best practice construction methods and on-the-job skills training;
- Enhances community safety through: reduced accidents, emergencies and disasters and 'safety through design';
- Manages urban growth and builds the State's regions through investment in regional urban and economic infrastructure and promotion of cruise tourism;
- Protects the environment for a sustainable future through best practice construction methods and promotion of sustainable eco- and cruise tourism;
- Grows a diverse economy and creates jobs; and
- Delivers responsive government through active community engagement through the EIS.

Potential risks to future port development and compatibility of the Port of Townsville have been proactively addressed by the Proponent throughout the EIS process.

Issues such as noise, vibration, air quality and traffic impacts have all been assessed in detail in the EIS and mitigation strategies have been recommended for adoption by the Proponent.

EIS Objectives and Key Issues

The objectives of the EIS are as follows:

- To provide information on the proposal and development process to stakeholders;
- To identity and evaluate all relevant issues;
- To identify all potential impacts of the TOT Project and measures required to minimise or compensate for adverse impacts and enhance benefits;

- To engage stakeholders in the process of identifying, evaluating and responding to impacts;
- To identify all necessary licenses, planning and environmental approvals required; and
- To provide an input into the decision-making process.

The key issues are covered by the following categories:

- TOT Project description;
- TOT Project justification and alternatives;
- Impacts on surrounding land uses, transport networks and land use planning;
- Impacts on infrastructure;
- Impacts on the coastal environment;
- Impacts on areas of cultural heritage values and/or indigenous significance;
- Air emissions and impacts;
- Soil and geology issues;
- Noise and vibration;
- Economic effects;
- Impacts on adjoining land uses;
- Social issues and opportunities;
- Safety and emergency; and
- Waste management.

The EIS has addressed and satisfies all key issues and meets the objectives of the EIS process.

TOT Project Description

The TOT Project involves:

- A dedicated cruise ship terminal and associated facilities; and
- The Breakwater Cove Precinct, and associated facilities includes:
- 500 multi-dwelling and 200 detached marina dwelling lots; and
- 460 private and marina berths including 10 super yacht berths; and
- Material extraction site(s) and transport routes.

The TOT Project will be constructed within the Western Breakwater of the Port of Townsville and provides dedicated berthing facilities for the cruise shipping industry and visiting naval vessels.

The Breakwater Cove Precinct is to be constructed on reclaimed land covered by tidal sea to the west of the TOT Precinct and would provide waterfront residential properties including attached and detached dwellings and multi-dwelling buildings.

The TOT Project will be constructed over three (3) years. Construction may commence in mid 2008. Construction of the entire TOT Project will require an average workforce of approximately 200 persons, with total employment created estimated to be 1,900 full-time equivalent jobs over the duration of the TOT Project.

Movement of construction materials and equipment will be via a combination of road transport utilising the main road networks of the region, and barge.

Rock and sand materials will be sourced locally from existing quarries and will be transported via road and barge. A temporary bridge over Ross Creek is proposed to facilitate the transportation of materials directly to the TOT Precinct.

Project Proponent

The TOT Project is being developed as a joint venture between TABCORP and City Pacific Limited (the Proponent) under contractual arrangements with the State.

The design and construction of the TOT Project will be the full responsibility of the Proponent after approval.

The Proponent is one of the largest non-bank lenders in Australia, with over $5 billion in funds under management. The Proponent has diverse experience in major projects and has constructed residential dwellings at the CPI Martha Cove Marina and canal estate on Victoria's Mornington Peninsula and refurbishment of Conrad Jupiters Casino on the Gold Coast.

Legislative Framework

The TOT Project was declared a significant project by the Queensland Coordinator-General pursuant to Section 26 of the *Queensland State Development and Public Works Organisation Act 1971*. This declaration requires the Proponent to prepare an EIS for the TOT Project.

This process removes duplication with the Commonwealth *Environmental Protection and Biodiversity and Conservation Act 1999* and streamlines approval processes under the *Integrated Planning Act 1997*.

The development of the TOT Project has required consideration to be given to a range of Queensland and Australian laws, in particular:

- *State Development and Public Works organisation Act 1971*
- *The Environment Protection Act 1994*
- *Coastal Protection and Management Act 1995*
- *Fisheries Act 1994*
- *The Great Barrier Reef Marine Park Act 1975*
- *The Breakwater Island Casino Agreement Act 1984*
- *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)*

Consideration also has been given to:

- The Townsville City Plan 2005;
- Requirements of the TOT Project areas to be included in the City Plan; and

- Future Development Area Scheme and the FDA Port Protection Code.

The decision-making authority for the TOT Project is the Coordinator-General. Key advisory agencies are:

- Department of Emergency Services;
- Environmental Protection Agency;
- Department of Health;
- Department of Housing;
- Department of Local Government, Planning, Sport and Recreation;
- Department of Main Roads;
- Department of Natural Resources and Water;
- Department of Primary Industries and Fisheries;
- Department of Tourism, Fair Trading and Wine Industry Development;
- Department of Transport;
- Queensland Police Service;
- Townsville City Council;
- Townsville Port Authority; and
- Department of Environment and Water Resources.

Compatibility with the Port of Townsville

Like many Australian ports, the Port of Townsville is facing challenges associated with 'urban encroachment'. The long-term interface between the Port of Townsville and the adjacent urban and residential environment is being considered by Port of Townsville Authority and Townsville City Council through the City-Port Interface Strategic Plan.

The Port of Townsville has been in operation for over 110 years. It provides a significant contribution to the region's economy in terms of value add and employment.

The port anticipates significant and sustained growth in activity over the next 20 to 25 years, possibly by a factor of 3. In planning for this, a master plan has been prepared by the Port of Townsville. The master plan addresses both the transportation requirements to-and-from the port as well as developments of additional or new facilities on port land.

Key elements of the port master plan include:

- An upgrade of Berth 4;
- An upgrade and extension of Berth 10;
- The decommissioning of Berth 7;
- The extension of Berth 8 to enable it to accommodate Panamax vessels;

- The relocation of a range of activities in a north-easterly direction (from present Berths 6 and 7); and

- The construction of new berths (No. 12 and 13) to the north-east of existing Berth 11.

The inner port (Berths 1-10) would typically handles general cargo, containers, minerals, sugar, motor vehicles, live cattle and scrap metal etc. while the outer harbour (Berths 11-13) will be dedicated to bulk dry cargo.

Possible impacts on the compatibility of the TOT Project with the port relate to air quality, noise and traffic impacts of future port development and increased operations on the Breakwater Cove Precinct.

While port activities are expected to grow, scientific assessments indicate that dust and odour emissions, and noise and vibration impacts are expected to generally remain within acceptable limits and therefore pose limited risk to future port expansion and operation.

There are several documents that, when combined together, provide for the protection and continuation of existing and future port operations and ensure that any complaints against the port users are restricted. Where exceedances are expected, mitigation measures are proposed.

The documents known collectively as the Port Protection Measures (PPM) include the Port Protection Agreement, Port Protection Code, Community Management Scheme for the Development and contractual protection on port operations.

The PPM has several layers of protection for Port of Townsville and Port users:

- Disclosure to first and subsequent buyers of existing and future port operations;

- Notification of the PPM prior to purchase of the existing and future port operations to first and subsequent buyers;

- Measures that limit buyers individually and/or by group actions against existing and future port operations; and

- Controls that regulate development designed to mitigate impacts from existing and future port operations.

The overall objectives and outcomes of PPM are:

- Acknowledge the necessity to Townsville of the economic benefit of the existing and future port operations;

- Make first and subsequent buyers abundantly aware of the existing and future operations and its potential nuisance including but not limited to air, noise and other nuisances;

- Regulation of body corporate rights to enable first and subsequent buyers to complain or litigation about existing and future port operations; and

- Regulate building design at Breakwater Cove Precinct to mitigate any impact of environmental uses.

As a result of the PPM, first and subsequent landowners will be required to overcome a number of protective measures prior to having the right to subsequently complain against the port operations or port users.

Acoustic assessments found that:

- Existing noise levels emitted from the Port of Townsville are considered to be within acceptable levels;
- Noise and vibration impacts that may arise as a result of construction activities undertaken within the TOT Project site will be controlled by mitigation measures proposed by this report and included in the TOT Project EMP;
- Future noise levels emitted from the Port are expected to increase slightly as a result of proposed Port expansions but will still be within acceptable limits; and
- The design and noise attenuation measures to be incorporated within the TOT Project site will ensure that adverse amenity impacts on nearby residents within the Breakwater Cove Precinct will be appropriately mitigated.

Air quality emission assessments indicate that the air quality at the TOT Project site is generally very good, and within the relevant State and National air quality goals for a range of relevant pollutants.

The results of air dispersion modelling of future port activities indicate that compliance is predicted for particulates and gaseous pollutants.

The main anticipated impact on residential amenity of future port operations on air quality relates to live cattle movements. Mitigation measures for this nuisance are proposed including:

- All dwellings have installed recycling air conditioners; and
- The Port of Townsville notifies the general public through public advertisement of scheduled cattle export activities; and
- The Port of Townsville be requested to notify Breakwater Cove Precinct Body Corporate of scheduled cattle export activities prior to the event.

Existing residents living in proximity to the Port of Townsville:

- Believe that the locational benefits and amenities of being close to the Strand, the ocean and the CBD outweigh the minor disamenities such as noise and dust pollution; and
- Have made very few complaints about port-related amenity impacts (three complaints in eight years).

The value of nearby multi-dwellings has appreciated significantly over the past five (5) years, at rates higher than the average valuation growth for units and apartments in Townsville. This confirms the fact that residents place a greater value on the amenity benefits of the locality irrespective of perceived disamenities from being near an operational industrial Port. This position is supported by similar popularity of residential land close to ports in locations such as Cape Town in South Africa.

As future noise and air emissions resulting from port growth can be effectively mitigated, prevailing levels of residential expectations of amenity and disamenity, together with robust PPM as described, will ensure that the proximate location of residential uses and an industrial port will not threaten the growth of the port into the future provided that port operations continue to operate within relevant EPA conditions and standards.

TOT Project Alternatives

A number of TOT Project alternatives were assessed to determine the preferred TOT Project configuration. These included:

- A 'do nothing' alternative;
- An 'ocean terminal' only TOT Project (excluding the Breakwater Cove Precinct);
- The original master plan; and
- The revised master plan with less intensive detached dwelling provisions.

Assessment of these options indicated that the TOT Project Plan was the preferred alternative, as they:

- Improved interface with the Port;
- Were more environmentally friendly and ESD; and
- Had no associated dredging.

Construction

Construction of the TOT Precinct on reclaimed land is expected to take place over three (3) years. The construction of residential dwellings is expected during the next 5-8 years.

The specifically engineered master plan for the TOT Project achieves close to a 'fill neutral' scenario, minimising the import of fill material for the reclamation. The new Strand breakwater will be constructed from barged in rock material and additional temporary sea walls will seal the TOT Project site within the existing breakwaters and the new Strand breakwater. The TOT Precinct site will then be drained and the land platforms and waterways created. This methodology has significant benefits in terms of minimising impacts on the surrounding marine environment and also expedites the construction process.

Most construction materials will be sourced from the Townsville surrounds, providing significant benefits back into the regional economy over the construction period.

The Breakwater Cove Precinct multi-dwelling sites will be on-sold by the Proponent to suitable developers, and it is expected that subject to take-up rates, the multi-dwellings will be fully occupied by 2018. Detached dwelling sites will be sold directly to the public. Dwelling construction is expected to take place over a 5-8 year period.

Land Tenure

The TOT Precinct is to be constructed on reclaimed land covered by tidal sea. Native Title will be surrendered as a result of the registration of an ILUA.

The State will issue development leases to the Proponent over the inundated land.

The Proponent will surrender the leases once the Breakwater Cove Precinct land is constructed, and the State will then issue a Deed of Grant in Freehold over the land.

The majority of land will form part of a layered arrangement pursuant to the Body Corporate and Community Management Act. This involves a Principal Scheme and several Subsidiary Schemes, in accordance with the provisions of various PPMs.

The Community Management Statement for the scheme land will provide for:

- Staging of the development;
- Prevention of pollution of the canals and damaging the common areas; and
- Implementation of the PPMs.

It is believed that Council will be responsible for the maintenance obligations for:

- Parkland outside Scheme land;
- Roadways (excluding internal); and
- Breakwaters.

Maintenance of the waterways will be the responsibility of the commercial marina operator and the principal Body Corporate.

Traffic and Transport

Existing land-based transport infrastructure affected by the TOT Project during and post construction are existing road networks feeding the Breakwater Precinct.

Analysis of the road network showed:

- Capacity constraints at the Flinders/Denham Streets intersection at times;
- This is aggravated by special events at the Townsville Entertainment Centre causing higher than normal traffic movements to and from the breakwater;
- The TOT Project will not materially impact the existing situation;
- Sir Leslie Thiess Drive, the main feeder to the TOT Project site, is more than adequate to accommodate the TOT Project.

Council's long-term traffic planning proposes a bridge across Ross Creek close to the breakwater as an extension of the Strand to Ross Street in South Townsville. The timing of this initiative is still to be determined.

Traffic modelling and analysis of existing standards of operations and performance indicators conclude that the existing network south of The Strand causes problems, rather than the Breakwater network (existing or proposed) itself.

Existing and future port and waterway transport will not be affected by the TOT Project. Existing and future port operations will not be adversely affected by construction and post-construction traffic.

The TOT Project does not affect existing non-port maritime infrastructure or waterway traffic, including:

- Marinas;
- Mooring areas;
- Boat ramps;

- Pontoons; and
- Associated land-based infrastructure such as car parks and hardstand areas.

A number of transport haulage options and routes were assessed for the delivery of rock and sand materials to the TOT Project site. Assessment of these options indicated that the preferred alternative involves the use of land transportation over a dedicated temporary bridge across Ross Creek and barge.

Non-Transport Infrastructure

An Energy Master Plan has been developed to enable the provision of low voltage power reticulation to each dwelling in the Breakwater Cove Precinct and to service the ocean terminal. Site lighting has been designed in accordance with relevant Australian standards.

The provision of potable water for both the Breakwater Cove Precinct and to service the ocean terminal, will be in accordance with:

- Council policies on Water Reticulation;
- Department of Natural Resources guidelines;
- *Water Act 2000*;
- *Sewerage and Water Supply Act 1949*;
- Water Reticulation Code of Australia; and
- Institute of Public Works Engineering Australia Codes.

The provision of fire hydrants, fire hose and fire sprinkler services will be in accordance with the requirements of:

- BCA; and
- Australian Standards.

A site-based Stormwater Management Plan has been prepared in such a way that there will be no impacts on the existing water quality in receiving waterways during the operational phase of the TOT Project.

The provision of sewerage requirements to the TOT Project site will be in accordance with:

- Council policies in Sewerage Systems;
- Institute of Public Works Engineers Australia Codes;
- Water Resources Guidelines;
- Water Act 2000;
- Sewerage and Water Supply Act 1949;
- Sewerage Code of Australia;
- European Standard – Vacuum Sewerage Systems.

Waste

There are a number of activities identified that are associated with generation of a range of solid and liquid wastes during the construction of the TOT Project. The potential exists to recycle or reuse a large proportion of this waste material.

This will effectively reduce the cost of disposal and volume of waste sent offsite. Strategies for dealing with the waste have been identified so as to minimise waste generation and disposal.

Water Resources

A Stormwater Management Plan has been prepared as noted. Additionally, the TOT Project will proceed in accordance with:

- Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000; and
- Queensland Water Quality Guidelines 2006 (EPA).

Environmental best management practices have been proposed for treatment of stormwater flowing through the site. Stormwater quality improvement devices will be implemented to reduce pollutants leaving the site.

Coastal Environment

The TOT Project site is not in any coastal management district.

The TOT Project involves the reclamation of lands and the construction of new breakwaters. Generally the existing water quality is characterised by being slightly-to-moderately disturbed. Water quality is affected by existing boating and port activities and stormwater runoff from the urban environment.

The construction and operation of the proposed ocean terminal and Breakwater Cove Precinct should have minimal impact on water quality with proposed mitigation measures in place.

The location of the new breakwaters is not expected to affect prevailing tidal patterns, and will result in no disturbance to existing beach settlements along The Strand.

Mitigation and remediation measures have been identified to address such impacts.

Air

The air quality in the TOT Project area is typical of an urban area with some industrial activity.

Air sensitive receptors within the TOT Project area include the 700 proposed detached and multi-dwelling dwellings and the ocean terminal facility.

The main source of air quality impacts on the TOT Project are existing and future port activities.

Odours from live cattle and to a lesser extent sugar loading are expected to be the primary air quality impacts. Measures have been identified to advise local residents of when loading/unloading of such cargoes is to take place, to minimise the inconvenience of such impacts.

Other sources of air quality impacts are diesel emissions as ships depart the port. These emissions are required to be within appropriate Environmental Protection standards and at that level are not a nuisance.

Additionally, appropriate residential building design guidelines have been proposed to further mitigate the potential exposure of dwellings to such odours.

Scientific analysis confirms that the much publicised dust emissions in Townsville (a) do not originate from the port and (b) are generally of acceptable levels. As such, provided that port operations continue to take place within allowable levels according to relevant EPA constraints, the impact of dust resulting from port activities on local residents is expected to be minimal.

Visual Amenity and Lighting

The TOT Precinct is characterised by a high level of lighting, generally similar to but more downward-directed (less glare spillage) than the existing port operations. The Breakwater Cove Precinct will have 'warmer' and less 'industrial' lighting associated with streets, jetties, houses and parkland. Perimeter lighting along the main public access road will be intermediate in height, colour and tone. The overall visual effect will be an increase in lighting which will add to the attractiveness of Townsville's nightscape, as seen from The Strand, Castle Hill and offshore, in that there will be more of a transition between the foreshore and the Port.

Internally, the 3m mound and 3m acoustic barrier (plus tall trees) will diffuse and part-screen lights from the Port, terminal and any berthed ship, such that visual intrusion to the residential areas is minimised.

Breakwater Cove Precinct will include areas close to the existing port operations, but the port has long been an accepted part of Townsville's foreshore character and its appearance has largely been accepted by Townsville's community. Nevertheless any potential visual impacts on new residents will be minimised by the landscaped mound and fence and other screening measures.

Noise and Vibration

The TOT Project is located adjacent to an operating industrial port and Jupiters Casino.

Noise sensitive and vibration receptors within the TOT Project area include the 700 proposed detached/multi-dwellings. The existing background noise of the TOT Project area is consistent with that of most areas adjacent to industrial activity. Existing noise levels are within acceptable levels.

Growth in port activity will be the primary driver of noise and vibration impacts. The expansion of Berth 10 in particular (as it is the closest to the proposed Breakwater Cove residential Precinct) may give rise to increases in the *duration* of such impacts. However, acoustic analysis indicates that port activity growth will not lead to unacceptable increases in noise *levels*.

Measures have been identified to mitigate the impact of noise and vibration on residential amenity. Such measures include:

- The construction of a 6m acoustic barrier;
- Use of appropriate construction materials; and
- Application of design principles for new dwellings to minimise residential exposure to noise and vibration caused by port activities.

The operations of the TOT Precinct are expected to generate some noise impacts on local residents. When cruise ships arrive and depart the port, the main noise impact will be the sounding of the horn and the PA systems together with engine noise. When ships arrive and depart during normal hours (e.g. between 7am and 7pm), it is expected that such noise impacts will not be significant or unreasonable. Use of a ship's horn outside of these times will be regulated under a Terminal Management Plan.

Noise and vibration levels during TOT Project construction are also predicted to be within acceptable standards. A Construction Noise and Vibration Management Plan will be implemented to manage noise and vibration impacts.

Measures to manage the noise and vibration impacts on marine mammals are incorporated into the EMP. They include:

- Increased awareness for operators in the marine environment;
- Safety zones prior to construction;
- Vessel speed restrictions; and
- Site inspections.

Nature Conservation

An EMP has been prepared in response to the potential environmental impacts of the TOT Project, identified in the EIS.

Cultural Heritage

The TOT Project exhibits environmental cultural heritage values as it is to be constructed/reclaimed from the seabed covered by tidal sea.

Indigenous Cultural Heritage

An Indigenous Land Use Agreement (ILUA) for the TOT Project has been agreed and executed by City Pacific, the State and the Traditional Owners, and is presently being advertised to enable registration.

Native Title within the Precinct will be surrendered upon registration of the ILUA and issue of the development lease over the Precinct to the Proponent by the State.

A Cultural Heritage field assessment report has been completed and its recommendations have been incorporated into a Cultural Heritage Management Plan (CHMP).

A CHMP has been agreed and executed by the Proponent and the Traditional Owners.

The CHMP was approved by the State on 7 September 2007 and entered into the State register.

The CHMP includes a process for including Traditional Owners in protection and management of Indigenous cultural heritage, should the same be discovered during construction and operational phases of the TOT Project.

Non Indigenous Cultural Heritage

Analysis of non-indigenous cultural heritage determined that there were no values identified.

Social

The local and regional community affected by the TOT Project include residents in the nearby Strand Precinct and to lesser extent residents of South Townsville.

The Townsville population, including those in the Strand Precinct, value the city's vitality and relaxed lifestyle. Residents also value the economic dynamism of the region, and the prosperity that has been experienced and sustained over the past decade.

The TOT Project builds from, and reinforces these prevalent social values.

Over 55% of Townsville and Thuringowa residents support the TOT Project, citing the economic and tourism benefits, with a further 20% being neutral. Net favourability amongst local residents was +34.2%.

The additional recreational facilities and open spaces will enhance the social infrastructure in the City and extend the recreational opportunities of The Strand.

Health and Safety

Potential health and safety impacts on local residents and the TOT Project workforce are driven by factors such as:

- Noise;
- Air quality;
- Traffic; and
- Disease vectors.
- The implementation of the following is expected to mitigate potential health impacts:
- Noise mitigation measures as outlined above;
- Air emissions mitigation measures as outlined above;
- EMP;
- SMP;
- Crime Prevention through Environmental Design Principles;
- Workplace Health and Safety Plan;
- Emergency Response Plan;
- Mosquito Management Code of Practice;
- Council's Mosquito Management Plan.

Economy

The TOT Project will deliver significant long-term economic benefits to the region during construction and when fully operational.

The ocean terminal is estimated to contribute $4.7m annually to Gross Regional Product and create 55 full-time equivalent jobs directly and indirectly, when receiving 20 cruise vessels per year.

During construction, the TOT Project will have impacts on the local labour market and housing market.

The region's construction and related sectors have been growing strongly. The labour market for construction-related personnel and skills is tight. The TOT Project will increase demand in the local economy for construction-related skills. Some of these skills needs will be met by existing workers in the region; others will be met by new workers moving to Townsville.

As it is likely that some of the workforce will come from outside of Townsville, the TOT Project will continue to place demand pressures on the local housing market.

Townsville's population has experienced sustained growth, with over 60% of this growth resulting from inward net migration to the city from both 'economic' and 'lifestyle' migrants. The residential market is consequently tight, and in some sectors showing signs of some affordability pressures.

The regional new housing construction sector is operating at near full capacity. There are many TOT Projects proposed and underway across a broad range of accommodation options ranging from broadacre residential subdivisions through to extensive medium to high density residential TOT Projects in and around the Townsville CBD. The immediate future of the housing market in Townsville is expected to remain tight as supply struggles to meet demand, whether or not the TOT Project proceeds.

In this climate, it is expected that additional workers will be accommodated within the existing supply of housing in conditions of tight supply-demand balance and rising costs. Affordability pressures will prevail for the foreseeable future, regardless of whether the TOT Project proceeds.

The additional stock of dwellings resulting from the TOT Project will, over the longer term, contribute positively to the region's supply to meet expected future demand for housing.

Hazard and Risk

Risks to the health and safety of employees, the general public and the environment will be present during the construction and operation of the TOT Project.

A risk assessment has been undertaken as part of the EIS.

This assessment has identified that the risks are typical of TOT Projects of this nature and are generally considered to be of low to moderate levels. There are no identified 'extreme' or 'high' risks to construction, persons or the environment.

Potential risks and hazards have been identified at a high level and a detailed and TOT Project specific risk assessment will be completed as part of the Construction Safety Management Plan, which will be prepared in accordance with relevant parts of AS/NZS Risk Management Standard 4360:1999.

Conclusion

The TOT Precinct is a critical infrastructure asset for the growth of Queensland's cruise ship tourism industry.

It will enhance the ability of Queensland to capture growth opportunities in cruise tourism by providing berthing certainty to cruise operators and the navies of the world. Not only will the TOT Precinct directly contribute to cruise tourism development in North Queensland, it is expected that it will catalyse the development of a range of ancillary marine-based tourism activities in the region. It is also expected that the TOT Project will foster the growth of a range of support industries to service increased marine activity in Townsville.

The major issues and potential impacts investigated in this EIS include the following:

- Disruption to existing and future activities and growth of activities at the Port of Townsville;
- Disturbance of the marine environment;
- Disturbance to areas of cultural significance;
- Temporary increase in traffic to the local road network; and
- Benefits to the local and regional economy.

This EIS concludes that after implementation of mitigation measures in a few appropriate areas to minimise effects, the impacts of the project are acceptable. The long-term social and economic benefits presented by the TOT Project can be realised without undue risk to environmental, social and cultural values of the TOT Project area and the city of Townsville, together with the North Queensland environs.

TOT Project Team

The EIS was undertaken by City Pacific with assistance from a team of expert consultants as listed below.

Organisation	**Role**
City Pacific Limited and Tabcorp	Proponent
MacDonnells Law	Project Planning Lawyer
Hyder Consulting	Lead Consultant
C&R Consulting	Ecologist and Hydrogeomorphologist
Coastal Engineering Solutions	Coastal Engineer
Global Environmental Modelling Systems	Oceanographer
Golder Associates	Geotechnical Engineer
Holland Traffic Consulting	Traffic Engineer
Veitch Lister Consulting	Traffic Modelling
Air Noise Environment	Air Quality Consultant
Chenoweth EPLA	Visual and Landscape Consultant
Transpac Consulting	Social and Economic Consultant
Northern Archaeology	Cultural Heritage Consultant
Steve Paul and Partners	Hydraulic Engineer
Hasthill Consulting	Electrical Engineer
EMC Technologies	Electromagnetic Radiation Consultant