

16. Economic

16.1 Ecotourism Opportunity Costs

There are currently no ecotourism activities associated with Boathaven Bay.

Boathaven Bay is unlikely to offer significant opportunities for dugong watching as this area is not considered to support the dugong population density that would be needed to make dugong watching the central theme of an ecotourism proposal (see also Appendix A).

Canoeing and mangrove boardwalk activities are not precluded by the proposed Port of Airlie. In fact, the proposed boat ramp facility may provide an opportunity to gain easy access to Boathaven Bay, making canoeing activities more accessible to tourists. It is the intention of the proponent to construct a mangrove boardwalk linking Port of Airlie with mangroves of the Campbells Creek estuary and providing interpretive material. This will provide an opportunity for locals and visitors to visit mangrove ecosystems without significant impacts on the ecosystem. The boardwalk, combined with public waterfront access routes within the marina will also increase the popular coastal walking path at Airlie Beach considerably.

16.2 Demand for Residential Development

The following comments are made in relation to the question of need for the residential component of the proposed development:

- ❑ The need for the residential component is inextricably linked to that of the whole development, and an integrated approach to assessing need is required
- ❑ The proposed residential mix is unique, and inadequate planning provision currently exists for these types of residential development
- ❑ The outlook for the residential market in Whitsunday is favourable, and a strong and sustainable demand for the proposed residential component has been identified. The distinction between residential and ‘tourist’ accommodation is not clear-cut
- ❑ The need for medium to high density residential development in this locality has been recognised by the strategic plan
- ❑ The proposed development will result in significant community benefits

These comments are expanded upon below

16.2.1 The Need for an Integrated Approach

The residential component is merely one part of an integrated and multi-faceted development, and any assessment of need should therefore be based on the integrated whole, and not on a particular component viewed in isolation.

It is a commercial reality that the residential component will be critical to the success of the entire development, and that its exclusion would be fatal. The incredibly high capital and ongoing operational costs associated with a marina development, and the cyclical nature and high levels of risk and uncertainty associated with the tourism industry, are factors which demand the inclusion of a residential component if the development is to succeed.

An integrated approach to the planning and development of major tourism-related projects has thus become essential, particularly within regional areas competing with the major capital cities for domestic and international tourism, and this is why so many tourism projects have followed the ‘integrated resort’ model. Notable examples within the region include Hamilton Island, Laguna Quays, Keswick Island and East Point Mackay.

Accordingly, we do not believe that the Tourism designation of the site should be interpreted as dictating that the subject site must only be developed exclusively for tourism purposes, or that it should be interpreted so narrowly as to the types of land use that constitute ‘tourism.’ In our view, the intent of the designation should not be taken to necessarily preclude integrated developments, featuring both tourism and other related land uses, such as that proposed in this case.

Recognition of the fact that early cash flow from residential and/or condominium sales is essential to achieve financially viable tourism development outside of the metropolitan areas, and specifically outside of the SE Queensland region. The comparatively small population base of regional centres, and their dispersal through the state, makes it essential that a mix of residential and apartment sales be permitted to combine with ‘stand alone’ resort operations, if tourism is to succeed in regional areas. This trend is likely to continue, and in fact expand, to include other ‘early cash flow’ components such as retail and commercial land use components.

16.2.2 The Proposed Residential Mix Is Unique

The proposed residential development will offer a mix of products unique in the Whitsunday context, in that all of the units and lots will be on reclaimed land having direct frontage to, and foreground views over, the proposed marina, the foreshore and/or the ocean. Added to these features will be unprecedented access, within easy walking or cycling distance, to the range of amenities within Airlie Beach and within the proposed development itself.

It is a fact that residential options offering this combination of location, outlook and amenity will be almost, if not entirely, unique within Airlie Beach and the Town of Whitsunday. Whilst, the strategic plan does contain areas designated for medium density residential development within Airlie Beach, these:

- ❑ Are overwhelmingly confined to the southern side of Shute Harbour Road, which forms a hard barrier to waterfront access,
- ❑ Are, in many cases, also confined to peripheral, and therefore less accessible locations, and
- ❑ Lack the potential for direct access to a marina and the range of amenities that will be incorporated into the proposed development.
- ❑ Part of the need for the proposed residential development therefore lies in its obviously unique characteristics and the lack of comparable opportunities to achieve this unique combination of amenity and accessibility within the areas designated under the strategic plan for this type of development. The proponent’s market research has identified a strong national and international demand for a residential component within the development, which demand is clearly not otherwise adequately catered for within Whitsunday.

16.2.3 Strong Demand Exists for the Proposed Residential Component

A clear and sustainable demand for the proposed residential development has thus been identified, and development will be staged to meet such demand. For these reasons, any concerns that the proposed residential component would somehow be premature are misplaced.

The combined effect of the following demographic trends will ensure the continuation and even acceleration of residential demand patterns in Whitsunday in the foreseeable future:

- ❑ A very strong population growth outlook for the town,
- ❑ The increasing median age of the population across Australia and the fact that the ‘baby boomer’ generation is approaching retirement age,
- ❑ The growing preference for coastal locations, often dubbed the ‘sea-change’ phenomenon, and
- ❑ Declining household sizes.

The Whitsunday Shire is expected to continue its strong population growth performance, under which it has grown at an average of approximately 3.1% per year since 1991. The growth of the Shire has far outstripped the average growth rates for Queensland (1.7%) and for Australia (1.1%) (Figures taken from *Population Trends and Prospects for Queensland*, 2001 (DLGP)). DLGP projections expect the growth of the Shire to continue, albeit at progressively declining rates, over the next two decades. What is perhaps most significant in relation to this analysis, is that the vast majority of this impressive growth performance has been, and will continue to be, centred in the Town of Whitsunday.

It is well-established that the population of Australia is an ageing one, with the national median age having increased from 32 in 1991 to 35 in 2001, and the percentage of persons over 65 years having increased over the same period from 11.3% to 12.4%. The Whitsunday Shire has mimicked these national trends closely, with the median age expected to continue to increase to 41 by 2021, and the proportion of persons over 65 to 13.3%, as the baby boom generation enters this age cohort.

The “sea change” phenomenon, by which Australians increasingly prefer to live within coastal locations, has been widely documented. This trend is recognised in the WHAM 2015 Regional Plan, which confirms that *“Future trends are likely to see a proportional increase in coastal urban and locality populations and further decline in the inland urban and rural populations.”* WHAM makes specific reference to the high growth experienced in the coastal centres of the region, relative to the modest growth, or even decline, within the inland centres, noting that *“Ninety percent of all dwelling approvals between 1991 and 1999 were in the coastal LGA’s of Mackay, Whitsunday and Sarina.”*

An effect of this trend within the state has been the growing scarcity of land within established coastal areas, resulting in a growing demand within regional coastal locations such as Mackay and Whitsunday. Factors driving this trend include the increasing demographic significance of older and retired persons and the development of increasingly effective communications technologies.

Demographic data for Whitsunday, and for Queensland as a whole, reflect declining household sizes, driven presumably by declining fertility rates, an increase in single person households, the ageing population and a growing trend towards the ownership of ‘weekenders’ and holiday homes. Census data reveal that the average household size in Whitsunday has declined somewhat since 1991, from 2.6 persons per household to 2.3. A similar decline has been observed at the state level.

The combined effect of these demographic trends makes for a very positive outlook for the Whitsunday residential property market, which is expected to benefit from strong natural increase, strong and growing in-migration and declining average household sizes.

16.2.4 The Distinction Between Residential and ‘Tourist’ Accommodation

It is not necessarily possible or appropriate to draw a clear cut distinction between residential and tourist accommodation as the two are not mutually exclusive.

A significant proportion of the so-called “residential” development proposed will, in reality, function as tourist accommodation, either through being used as private holiday homes, or through being developed by investors specifically for the purpose of holiday letting. Simply because an area of the site is labelled as “residential” on a plan does not mean, in reality, that these areas will necessarily be lost to tourism.

Similarly, the distinction between each form of accommodation will change over time, in response to fluctuating market conditions. For example, if prevailing market conditions at any one time dictate that more tourist accommodation is needed in Airlie Beach, capacity in this area will become available in response to this demand. This will occur by way of dwelling units or houses either being sold as holiday homes, or being released by owners for holiday letting purposes.

Thus, once again, the residential component must be seen as being integral to the proposed development, and not separated out as if it were an unrelated, stand-alone development.

16.2.5 The Strategic Plan Recognises a Local Need for Residential Development

It is important to note that a strategic plan is a broad guideline for development decisions by Council, and is neither intended nor designed for precise, rigid or deterministic interpretation and application. It is for this reason that the strategic plan itself states in Section 2.1 that:

*“The designations appropriate for different areas of the Shire are shown **schematically** on the Strategic Plan Map. Council will determine the designations at the time an application is made for development.” (our emphasis)*

This extract raises two important points:

- ❑ The boundaries between designations are schematic only, and
- ❑ The way is open for Council to consider the specific context of a proposal and to make a determination as to the designation of a site.

In this context, it is significant that the Council's strategic plan recognises the need for medium density residential development (among other forms of development) in the immediate locality of the site. The strategic plan is, of course, the product of a rigorous planning study of the Shire, and its designation of land in this locality for medium density residential purposes confirms the need for such development in this locality.

It is also significant that the area in the vicinity of the site designated for medium density residential development is already extensively developed, and that this development has not been exclusively for so-called 'permanent residential development.' These factors further reinforce our conclusion that there is a clear need for the residential component of the proposed development.

16.2.6 Community Benefits

There is no sound basis upon which to suggest that either the development as a whole, or the residential component on its own, will result in any significant dis-benefit to the Whitsunday community. Any localised impacts will be dealt with by way of appropriate design, or by way of suitable management measures. On the other hand, the residential component will benefit the community in a number of ways, including those outlined below:

- ❑ By releasing more direct waterfront residential capacity,
- ❑ By increasing residential choice,
- ❑ By injecting significant investment into the local and regional economy and
- ❑ Creating direct employment for 300-400 persons,
- ❑ By helping to grow the town and improve economies of scale,
- ❑ By helping to further enhance the wider image of the Shire, and
- ❑ By contributing to the development of necessary tourism infrastructure.

16.3 Demand for Commercial/Retail Development

Whitsunday Shire Council commissioned a Retail Development Strategy in early 2000, and this document was released for public consultation in the latter part of that year. This study identified a need for an additional 15,000m² of retail floor space to be released by 2011. The draft study went further to suggest that 4,000m² of this additional capacity should be allocated, on the basis of anticipated population and tourism growth, to Airlie Beach.

The proposed retail/commercial component will total approximately 4,400m² of floor space and will comprise various entertainment, food & beverage uses and tourist and marine operations.

It will exceed the Airlie Beach "allocation" under the draft retail strategy. However, the following comments are made in support of the proposed retail and commercial development:

- ❑ The need for the retail and commercial components must again be seen in the context of the overall development, and not in isolation. Once again, these components are essential to the ultimate success of the overall venture, especially through their ability to generate short term cash flow, and their exclusion would, at best, seriously undermine the viability of the overall development and, at worst, render the entire project unattractive to investors and financiers.

- ❑ It is expected that the split between retail and commercial will be about 50/50. Of that most of the commercial areas will be taken up by existing maritime businesses, who, because they are currently poorly serviced, wish to relocate their businesses to the centre of maritime activities in the Whitsundays.
- ❑ The retail and commercial areas are located within Precincts C, F, G, and H.
- ❑ It is expected that a number of new businesses will be attracted to Airlie Beach because of the nature of this development, and the associated franchise chains are likely to take up the cafés, restaurants and the like.
- ❑ The draft retail strategy did not anticipate the in-situ tourist and resident populations that would be introduced by the overall development, which will amount to some 1,200 people at peak occupancy periods.
- ❑ The draft retail strategy was based upon conservative projections of residential and tourism growth and expenditure, and our assessment suggests that the actual requirement for additional retail floor space up to 2011 would be in the order of *at least* 17,000m².
- ❑ The strategy allocated 2,000m² of the 15,000m² in additional retail capacity to Proserpine. Our assessment would suggest that the emphasis in Proserpine over the next 8 to 10 years should be on the redevelopment of existing capacity, rather than on significant expansion. This would “free up” a further 2,000m² for allocation to more dynamic retail markets, such as Airlie Beach.
- ❑ The strategy dealt only with the need for additional retail floor space, and the Airlie Beach ‘allocation’ did thus not include the additional need for commercial provision.
- ❑ The limited quantity of proposed commercial space is expected in the main to be taken up by operators directly associated with the proposed marina and associated marine facilities, as well as with other elements of the proposed development, and the impact of the proposals on the overall market for commercial floor space will thus be insignificant.
- ❑ The quantity of retail and commercial space to be made available will in any event not exceed projected demand at the time of construction and, if necessary, the development of this capacity will be staged in response to demand patterns.

On the basis of the above analysis, it is submitted that there is a need for the proposed retail and commercial component. In addition, it is pointed out that a more detailed needs assessment, or assessments, will be undertaken in conjunction with future development permit application(s). There would seem to be little value in undertaking such a detailed assessment at this early stage, given the clear evidence of need, as outlined above, and given the highly dynamic nature of the market.

16.4 Economic Impact on Fisheries

16.4.1 Overview

Boathaven Bay supports a variety of habitat (including mangrove and seagrass) widely recognised as contributing to fisheries productivity (Blaber 1997; Halliday & Young 1996; Laegdsgaard & Johnson 1995; West & King 1996; Laegdsgaard and Johnson 1995; Connolly 1994; Coles & Lee Long 1985).

The value of fisheries in Whitsunday Shire is very low, less than 0.1% of Queensland’s commercial fishing revenue. The nearest significant fishing fleets are located at Bowen and Mackay. Vessels from these fleets would fish waters off Pioneer Bay. Discussions with commercial fishing groups in the region and Sunfish

(recreational fishing) indicate that commercial and recreational fishers have no concerns regarding the proposal and see the potential impact on fisheries as being insignificant.

The only recognised commercial fishery in Boathaven Bay is opportunistic crabbing within Campbells Creek and foreshore mangroves of the bay; Boathaven Bay is a low-use recreational fishing area, when compared to other areas in the region (WBM 1998). Crabbing in much of the bay will be able to continue.

An assessment of impacts on fisheries is made below based on evaluation of each habitat type. It should be noted that neither GBRMPA nor DPI was able to provide an accepted methodology for this assessment and a methodology has been used based on expert knowledge and previous studies.

16.4.2 Mangrove Habitat

Ecological Importance of Mangroves

Typically, mangroves are restricted to sheltered shorelines occupying the intertidal shallows between the sea and land. The 'soil' or sediment upon which mangroves grow may be clean coarse sand, but is more commonly fine silt and mud, high in nutrients but essentially anaerobic (lacking in oxygen).

Estuarine mangrove forests are important nursery grounds for many species of juvenile fishes (Halliday and Young 1996; Laegdsgaard and Johnson 1995; Robertson and Blaber 1992; Robertson and Duke 1990). Characteristically mangroves support greater abundances of fish than either seagrass areas or unvegetated tidal flats (Laegdsgaard and Johnson 1995; Blaber et al. 1992; Robertson & Duke 1987). Sub-tidal habitats characterised by mangrove-lined channels support a variety of fish with habitat-specific distributions according to each species requirements for food and shelter from predation (Zeller 1998). For example, mangrove prop roots and fallen timber snags support a higher abundance of estuarine snappers (such as *Lutjanus argentimaculatus*), rabbit fishes and bream than unvegetated banks and mid-channel habitat.

Mangroves are an important component of the estuarine habitat because they:

- ❑ Input significant amounts of vegetable matter into the food chain. Leaves, fruits, wood and bark fragments fall either directly into the water or to the ground. As these components decompose, they provide both soluble nutrients and detrital fragments, which are eaten by crustacea such as prawns and crabs and some fish. Bacteria and fungi also feed on the decomposing matter and in turn are eaten by larger organisms (West 1985);
- ❑ Trap, accumulate and release nutrients (and in some cases pollutants) and particulate matter (silt) from surrounding land, thus acting as a buffer to the direct effects of runoff (West 1985);
- ❑ Provide a habitat or shelter to a range of fauna and flora (e.g. Morton et al. 1987). Mangroves are recognised as important bird rookeries (e.g. Driscoll 1992), and the sediment in which they grow typically supports both a high diversity and abundance of fauna. Many species of algae and 'terrestrial' epiphytes are commonly found in association with mangrove communities. Mangrove fruit are eaten by the green turtle (*Chelonia mydas*), which is conservationally significant.

The creeks which wind through large mangrove forests are also important as fish habitat (West 1985); and because they

- ❑ Protect the shoreline from erosion emanating either from the water (waves, boat wash) or the land (runoff) (Blamey 1992) and contribute to the establishment of islands and the extension of shorelines (Blamey 1992).

Fisheries research of four mangrove habitats in north Queensland (Alligator Creek, McIvor River, Lockhart River and Escape River), indicated that mangroves in these areas were valuable as nursery sites, but not necessarily primary nursery sites for fish species of direct commercial importance in Australia (Robertson & Duke 1987). However, juvenile fish species captured in mangrove habitats contribute significantly to the diet of several commercially important fish species, including giant perch and barramundi (Robertson & Duke 1987; Robertson & Duke 1990).

Loss of Mangrove Habitat

Development of the proposed marina-complex will result in the direct loss of approximately 3 ha of fringing mangrove forest. That is, approximately 4% of the remaining mangroves in Boathaven Bay would be lost, or <0.1% of the mangroves in the region.

Most of the mangrove habitat lost as a result of Port of Airlie is in a narrow strip along Shute Harbour Road and subject to disturbance from traffic on Shute Harbour Road and, in some places, boats beached on the intertidal mudflats. The habitat value of such a narrow strip of mangroves is less than a patch of equivalent area that is more compact. However, it is recognised that this strip is almost contiguous with the larger area of mangroves at Campbell's Creek estuary. This may increase its value compared to a more isolated strip as fish and other marine species based in Campbell's Creek estuary may forage along the Shute Harbour Road strip of mangroves.

16.4.3 Seagrass Habitat

Ecological Importance of Seagrass

Seagrass meadows, like mangroves, also provide important nursery habitat, particularly for a range of crustacean species (West and King 1996; Laegdsgaard and Johnson 1995; Connolly 1994; McNeill et al. 1992; Coles and Lee Long 1985; Young 1978). The distributions of juvenile tiger prawns (*Penaeus semisulcatus* and *P. esculentus*), eastern king prawns and endeavour prawns are strongly correlated with inshore seagrass meadows (Staples et al. 1985). Seagrass leaves provide physical cover for juvenile prawns and fish and provide a substrate for both epiphytic algae and minute grazing animals, which form a major component of the prawns' diet. Seagrasses also provide a direct source of food for dugong, some turtle species (Lanyon et al. 1989), and some species of fish and crustacea other than prawns. Juvenile tiger prawns eat the seeds of eelgrass (*Zostera capricorni*).

As significant primary producers (Hillman et al. 1989), seagrasses have been recognised as playing a critical role in coastal marine ecosystems (Hyland et al. 1989; Poiner and Roberts 1986; Pollard 1984).

Seagrasses have the following functions (from Poiner et al. 1992):

- ❑ Trap, stabilise and hold bottom sediments (Poiner and Peterken 1995; Fonseca and Kenworthy 1987);

- ❑ Decrease water movement promoting sedimentation of particulate matter and inhibiting resuspension of organic and inorganic matter (Philips & Menez 1988);
- ❑ Supply and fix biogenic calcium carbonate (den Hartog 1970);
- ❑ Produce and trap detritus and secrete dissolved organic matter that tends to internalise nutrient cycles within the system (Moriarty et al. 1984); and
- ❑ Provide large amounts of substrate for encrusting animals and plants (Klumpp et al. 1989; Harlin 1975).

Seagrasses form dynamic marine plant communities that may undergo substantial change in response to changing seasonal factors (e.g. Coles et al. 1997). Light intensity, turbidity, sediment and water column nutrient concentrations and availability, temperature, depth, salinity and substrate characteristics may each be important determinants of both seagrass distribution and primary productivity. In the extreme, entire meadows may be lost (e.g. Abal and Denison 1996; Kirkman 1978); or may regenerate (FRC Environmental 1999).

Not all seagrasses have the same value as fish nurseries. Different seagrass species may support differing abundances of an essentially similar community of fishes. Even the same species of seagrass may have greatly differing habitat value, depending upon its morphology and a variety of external environmental characteristics. Ultimately, where a particular expanse of habitat is located may be more relevant to patterns of recruitment, than the characteristics of habitat structure (Bell et al. 1988; Jenkins et al. 1998; Bell & Pollard 1989; Bell et al. 1987; Young & Carpenter 1977).

Loss of Seagrass Habitat

Development of the proposed marina-complex will result in the direct loss of approximately 10 ha of intertidal and shallow subtidal seagrass meadows (calculated based on the maximum extent of seagrasses from all studies undertaken in seagrass distribution in Boathaven Bay). Dredging of the access channel will result in the loss of approximately a further 2 ha of sparse seagrass and unvegetated soft sediment substrate.

At the maximum distribution of seagrasses in Boathaven Bay, approximately 40% of seagrass in Boathaven Bay would be lost due to the proposal (see also **Section 9.5** of this Addendum). This equates to 15% of the seagrass meadows of greater Pioneer Bay; and to 2% of the seagrass meadows in the Whitsunday coastal region and 1% of total Whitsunday Region (Bruinsma & Danaher 2001). This loss might be significant and if so, may impact on associated flora and fauna at a regional scale. Species impacted would include commercially and recreationally important fish species.

However, it should be noted that the calculated loss of seagrass is likely to represent a maxima as seagrasses in Boathaven Bay are known to fluctuate considerably. Over the past decade, and in other seasons, there has been considerably less seagrass in Boathaven Bay that exists currently (September 2002) (FRC Environmental 2002). Anecdotal evidence is that, in April 2003, seagrasses had retracted almost entirely from the intertidal zone, thus supporting the conclusion that the September 2002 coverage observed by FRC represents a “best ever” coverage of seagrass in Boathaven Bay. It is likely that as weather patterns change over the next decade and into the future, the seagrass distribution within Boathaven Bay will fluctuate markedly, and at times be far less than is currently present. Fluctuations in extent of seagrass recorded

from Boathaven Bay have been of a greater magnitude than those recorded for other nearby bays (FRC, pers com 2003).

This loss also occurs in a context of stable or even increasing seagrass coverage in the Whitsunday Region.

Seagrass meadows provide important nursery habitat, for a range of commercially important crustacean and finfish species (West & King 1996; Gray et al. 1996; Laegdsgaard and Johnson 1995; Connolly 1994; McNeill et al. 1992; Ramm 1986; Scott et al. 1986; Staples et al. 1985; Coles & Lee Long 1985; Middleton et al. 1984; Young 1978). For example, the species in Queensland's east coast commercial prawn fishery are dependent upon seagrass meadows as nursery areas. Juveniles shelter and feed in these areas before recruiting to deepwater fishing grounds (Zeller 1998). Seagrass leaves provide physical cover for the young prawns and a substrate for epiphytic algae and minute grazing animals, which form a major component of the prawns' diet. Some seagrasses including the common eelgrass (*Zostera capricorni*) are themselves eaten by juvenile tiger prawns (O'Brien 1995).

Seagrasses in Boathaven Bay are temporally variable in distribution, generally fairly sparse and exist in a modified environment. The value of these seagrasses as habitat for fish, prawns and other commercially significant species is probably quite limited.

Impact on dugong is not likely to be significant (refer Appendix A).

16.4.4 Unvegetated Soft Substrate

Unvegetated sandy and muddy sediment, whilst commonly considered to be not as productive as areas supporting seagrass are also important to the ecosystem. Bare substrate is rarely bare. Where sediments are stable, microalgae communities become established within both the intertidal and shallow subtidal. The microalgae support an associated community of small benthic invertebrates (for example polychaete and nematode worms, cumaceans, copepods and soldier crabs), which in turn are an important source of food for fishes that include juvenile mullet (Hollaway & Tibbetts 1995), bream and whiting (Weng 1983). Mudflats may be transitional zones between juvenile and adult habitats (Laegdsgaard and Johnson 1995). Bare substrates in shallow waters may also provide shelter from larger predators and the opportunity to employ camouflage: whiting, flathead and flounder are each examples of species positively associated with bare substrate habitat.

Intertidal and shallow subtidal sand flats support a variety of fish species. Fish such as whiting and flathead feed in sandy areas, whereas other such as bream and mullet prefer the fauna associated with muddy areas.

The fauna associated with soft sediment habitats is typically determined by the character of the sediment: its grain size and stability; and with the presence or absence (Humphries et al. 1992b; Poiner 1980), or proximity of seagrass (Ferrell & Bell 1991). Grain size influences the ability of organisms to burrow, and the stability of 'permanent' burrows. Unstable sediments support less diverse benthic communities than those that are relatively stable.

Shallow water, bare sediment communities are characterised by widely fluctuating abundances, species richness and diversity. These fluctuations are correlated with

severe abiotic disturbances (such as wind and wave activity). During calmer months, shallow bare sand developed similar communities to deep water bare sand habitats (Poiner 1980).

Muds within the channel and marina basin may continue to support benthic communities, although these are likely to be somewhat different from what is there are present.

The proportion of such substrate to be modified by Port of Airlie compared to similar substrate available in the Whitsunday region is negligible and impacts are unlikely from this modification.

16.5 Financial Feasibility

The separately lodged, commercial-in-confidence financial feasibility identifies the development costs involved in the establishment of the marina and ancillary onshore facilities. These costs cannot be recouped from the marina revenues alone without artificially elevating the cost of marine berths. The Proponent has identified that the level of on shore development proposed is required to cover these costs, and provide a commercial return on investment, given the risks involved in undertaking such a development. The development proposal also provides for an appropriate and economically feasible means to dispose of excess material for excavation of the marina and appropriately matches the scale and type of marina facilities required by the community. It should be noted that the planned scale of land-based residential and commercial facilities has been significantly scaled back from two previous proposals within the current development lease.

The financial feasibility includes provision for the treatment of the worst case scenario for Acid Sulphate Soil.

16.6 Impacts on Adjacent Businesses

Adjacent businesses to the Port of Airlie consist primarily of tourist accommodation businesses along Shute Harbour Road in the vicinity of Hermitage Drive and the Airlie Beach Hotel in Coconut Grove. The proposed development will change land use adjacent to these businesses from intertidal coastline to a mix of residential, commercial and transportation uses. The view from these businesses will be altered (see also Section 17). While this may have a negative effect on the perceptions of some guests at these businesses, there are also likely to be a number of perceived benefits associated with proximity of the existing businesses to the proposal. These include being within close walking distance of the ferry terminal and cruise boats and long distance bus terminal and proximity to restaurants and recreational opportunities, including an all tide beach.

Impacts of the boat repair facility have been further reduced by relocation of this facility (see **Section 2.5** of this Addendum).

While the proposed Port of Airlie development will change the area nature of views for tourist accommodation businesses along Shute Harbour Road adjacent to the development, it is arguable that proximity to Port of Airlie is likely to be seen in a positive light by many tourists. Port of Airlie will offer a range of tourist attractions and facilities, not least of which is a transport hub for land and sea transport.

16.7 Impact on Property Values

It is recognised that the proposed Port of Airlie marina will change the nature of Boathaven Bay and that changes in adjacent land uses can influence property values.

There are no definitive studies on the effects of developments such as the proposed Port of Airlie on property values. Such studies are very difficult to conduct because there are a range of factors that affect market values of properties and it is difficult to isolate one of these factors (such as a change in adjacent land use) from other factors relating to the local economy, changes in demand for a particular style of property and so on.

An opinion was sought from a recognised leading valuer in Whitsunday Shire. Conroy and Associates have extensive experience in Whitsunday Shire as well as experience of property sales in other coastal locations in Queensland. Conroy and Associates conducted a review of property sales in the vicinity of the proposed Port of Airlie Marina and Abel Point Marina (Appendix B). The review notes that property values in the vicinity of the Port of Airlie development do not appear to have reduced since the announcement of the proposal, and in fact, may have increased. The review also notes the views of several property owners in the area who expect the value of their properties to increase once the Port of Airlie is complete. Conroy and Associates note that this increase is consistent with substantial property value increases observed on properties adjacent to other marina developments such as the Scarborough Marina and Newport Waters Marina on the Redcliffe Peninsula.

Clearly, the effect of a development such as Port of Airlie on adjacent land values is one of perception. For many, location of property near the marina with the range of visitor, transportation and recreational facilities offered is an advantage and would increase their willingness to pay for such property. For others, the presence of the Port of Airlie may be considered to be a disturbance and this group might seek a more isolated “natural” location to purchase or rent property.

The Port of Airlie is expected to have a positive impact on the local and regional economy through increased employment and demand for goods and services. Economic stimulation is also a major factor in increasing property values.

16.8 Demand for Tourist Accommodation

As stated in Section 15.2.2 of the Supplementary EIS, the tourism accommodation proposed at the Port of Airlie aims to bridge the gap between backpacker accommodation and high end star accommodation that is generally available in Airlie Beach and the nearby Whitsunday Island resorts. This is not to say that there are not already hotel rooms in this bracket available, but that there appears to be a gap at the intermediate level.

It should be noted that the ultimate standard of accommodation to be developed at each of the proposed tourist accommodation sites will be determined by:

- ☐ Market demands
- ☐ The profile of accommodation available in the area at the time of design/construction and
- ☐ Projections of future tourist accommodation development in the area.