North Stradbroke Island

Draft Situational Analysis

A sustainable economic future for North Stradbroke Island/Minjerribah

Toward Q2 Tomorrow's Queensland

Queensland Government

#29559

Prepared by: Queensland Parks and Wildlife Service, Department of Environment and Resource Management

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December 2011

Message from the Chair of the Economic Transition Taskforce

Following the Queensland Government's announcement of its vision for North Stradbroke Island/Minjerribah, an Economic Transition Taskforce (the taskforce) was established to lead and coordinate the development of a long-term strategy for a sustainable economic future on the island. The taskforce is overseeing the development of three documents that provide a framework for economic transition on the island.

Targeted community and industry consultation has been undertaken in developing key strategies and actions.

- The **Economic Transition Strategy** seeks to establish a framework that encourages sustainable economic activity, with a focus on the importance of people, infrastructure and land.
- The **Planning for Action** draft plan identifies priority actions with the potential to contribute to sustainable economic growth for the island and its community.
- The supporting **Situational Analysis** provides detail about the current economic state, history, natural environment and geography of the island, and sets the policy framework for the strategy.

The taskforce recognises that a healthy business environment, able to support small business, will be critical to the island's economic future. The newly formed local Chamber of Commerce is represented on the taskforce and enthusiastically endorses this approach. The Chamber has also highlighted the need for immediate and meaningful action to support struggling businesses, which underpins the Planning for Action document.

The Quandamooka People have played a critical role in the work program of the taskforce. The Queensland Government is committed to engaging the Quandamooka People in all industry action areas, now and into the future.

These documents aim to inspire community discussion about actions and opportunities for positive and sustainable economic change. The documents are not Queensland Government policy. Rather, they have been developed to encourage an economic transition for the island that includes short, medium and long-term actions. Once these priorities have been identified by the community, government (local, state and federal) and private investors will be able to make informed decisions about future funding options.

There are a number of actions better suited to a longer timeframe because of the need for in-depth scoping studies or information that will only be available once land use planning processes are wrapped up. In some instances, the current market is not considered adequate to support these initiatives, but they have been noted for consideration. Land use planning, infrastructure development and social policy outcomes are other themes the taskforce has identified as critical to the island's future.

In its deliberations, the taskforce has emphasised the importance of a financial commitment from the Queensland Government that will enable the prioritisation of actions that provide the highest economic and social value to the community.

We recognise that community input and support is essential to achieving our goals and as such, feedback from all interested stakeholders is welcomed.

To provide your feedback or obtain a copy of the documents please contact DERM via:

- NSI Strategy **phone** freecall 1800 194 064
- NSI Strategy **email** <straddiestrategy@derm.qld.gov.au>
- NSI Strategy **website** <www.derm.qld.gov.au/stradbroke/>
- NSI **Information Centre**, 7 Stradbroke Place, Dunwich

Ian Fletcher
Chair, Economic Transition Taskforce
Director-General, Department of Employment, Economic Development and Innovation

List of acronyms

ABS	Australian Bureau of Statistics
AMS	Associated Minerals Consolidated
ATSI	Aboriginal and Torres Strait Islander
CRL	Consolidated Rutile Limited
DEEDI	Department of Employment, Economic Development and Innovation
DERM	Department of Environment and Resource Management
DLGP	Department of Local Government and Planning
ETS	Economic Transition Strategy
ILUA	Indigenous Land Use Agreement
MBRS	Moreton Bay Research Station
NSI	North Stradbroke Island
QP&ATSI	Quandamooka People & Aboriginal Torres Strait Islander
QPWS	Queensland Parks and Wildlife Service
QYAC	Quandamooka Yoolooburrabee Aboriginal Corporation
RCC	Redland City Council
SEIFA	Socio-Economic Indices for Areas
SEQ	South East Queensland
SPA	*Sustainable Planning Act 2009*
SWMQ	Saltwater Murris – Quandamooka
TAZI	Titanium and Zirconium Industries
VET	Vocational Education and Training

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Preface

The Economic Transition Strategy (the strategy) recognises that North Stradbroke Island/Minjerribah's history, natural environment and Indigenous culture will play a significant role in shaping its future. Moreover, any decisions about the future of North Stradbroke Island/Minjerribah (the island) need to be informed by an understanding of information including demographics, social indicators, existing infrastructure as well as critical economic and industry data.[1]

This situational analysis is designed to underpin the approach set out in the strategy.

Section one focuses on the history, natural environment and geography of the island. While often viewed as background material, each of these areas has had a profound affect on what the island is today and why it is valued by residents and visitors.

Section two sets out the policy context within which current consideration of the island's economic future is located. This chapter identifies the key themes of the Queensland Government's vision, explains why the strategy is being developed, and presents the broad parameters within which economic change will take place.

Section three considers the island within its regional context and sets out Redland City Council (RCC) priorities as they apply to the island.

Section four considers the current status of key enablers within the economy, along the lines of people, infrastructure and land. Rather than treating these enablers as simply inputs into economic activity, this chapter seeks to highlight values that are identified in the strategy, particularly with regard to the unifying theme of sustainability.

Section five provides the current industry and employment profile of the island to allow for an identification of key opportunities and challenges for the future growth of existing business and the emergence of new industry sectors and employment options for the local community.

[1] The following sections outline basic information and data about the island drawn from the Census (2001 and/or 2006), unless otherwise noted.

1 Setting the scene

1.1 History*

The island's history has been shaped by a diverse range of factors reflecting both its Indigenous heritage and European settlement.

For the Quandamooka People—the traditional owners of Moreton Bay—history, land, sea and culture are inextricably linked:

> 'Our traditional estate—Quandamooka, the waters and islands of central and southern Moreton Bay and the coastal land and streams between the Brisbane to Logan rivers, gave life to us in a time beyond memory. We sing its songs, tell its stories and dance to its rhythms to give honour and thanks and to keep our place in its heart. We are the people of the sand and the water.'
> (p.5 Quandamooka Aboriginal Community Profile and Action Plan)

Ngugi, Nunukul and Goenpul are the three clan groups of the Quandamooka People whose country has included Minjerribah/North Stradbroke Island for more than 21 000 years.

The Indigenous culture of the Quandamooka People is bound by tradition and developed within a structure of beliefs and social relationships. Kabool (or Kabul, Borlung, Ngalyod) is the symbol of the Rainbow Serpent, the giver and taker of life and at the heart of this structure. Kabool is the spirit of creation and of all living things and is symbolic of belonging to, and being interconnected with, the law of the land. This law has been handed down from generation to generation. To use the words of Aunty Joan Hendriks, Aboriginal Elder of the Quandamooka People, '[i]t recognises that the spirit of our ancestors lives on with us and in the Earth our Mother; the dwelling place of the Creator Spirit.'

The Quandamooka People tell an age old traditional story that the island of Minjerribah (North Stradbroke Island) and Morrgumpin (Moreton Island) were once linked or joined. This is consistent with European historical accounts of the island as Captain Cook (in 1770) did not make reference to the South Passage Bar. It is generally accepted that over many years the two islands have separated due to the (current or tidal?) erosion that continues today.

European settlement took place from 1825 when the island was briefly used as a penal settlement. The island was named Stradbroke in 1827 by Captain Henry John Rous, after his father, the Earl of Stradbroke and originally included both North and South Stradbroke.

A pilot station was established at Amity Point in 1825 and a depot for unloading stores was set up at Dunwich in 1827. This was the beginning of permanent contact between Europeans and the Quandamooka People. While the Quandamooka People assisted in the building of the pilot station, conflicts emerged as a result of different laws and culture, and consistent with the history of other Indigenous Australians, massacres took place in the area at Aranarawai (Big Creek) and on the Southern Bay islands.

From 1850, fishing became a major industry in the region and the island was opened up to free settlers. In the same year Dunwich was proclaimed to be Moreton Bay's quarantine site and only a few weeks later a ship pulled in that was found to be carrying typhus. All the passengers were placed in quarantine and 56 people died. The quarantine station discouraged European settlers and thus placed less pressure on the traditional ways of the Quandamooka People.

The quarantine station was moved to Peel Island in 1864. Dunwich was then nominated to host a benevolent asylum, which opened up employment opportunities for women, while men took to fishing and farming and as such the population of the island grew. Oyster farming was also established which employed many European and Indigenous people.

* Prior to the arrival of Europeans, Australian Aboriginal languages had been purely spoken languages, and had no writing system. The Latin alphabet of the colonisers was inevitably used for the transcription of Australian Aboriginal languages, but the details of how the sounds were represented has varied over time and from writer to writer, sometimes resulting in a great many variant spellings of the same word or name. (http://en.wikipedia.org/wiki/Transcription_of_Australian_Aboriginal_languages).

Many of the Quandamooka lived at Goompi (Dunwich) and at the Government run Myora Mission from 1893 during this period. With the introduction of the *Aboriginal Protection and Restriction of the Sale of Opium Act 1898* (Qld), the Quandamooka, like other Indigenous Australians, were stripped of their basic human rights and their ability to practice their traditions, speak their language and honour their ancestors and their country. (p.6 Quandamooka Aboriginal Community Profile and Action Plan)

From the late 1930s, the State moved from a policy of isolation to assimilation. Neither approach succeeded in destroying the Quandamooka People’s connection to culture and country.

Tourism came to the island in the 1930s with the opening of the first guesthouse at Point Lookout and the first bus service to Point Lookout was established by Bert Clayton with a trend towards opening up the island beginning to take place.

During World War II armed servicemen were stationed on the island, radio tents were set up and a radio direction finder and radar was erected at Point Lookout. On 14 May 1943, the Australian hospital ship 'Centaur' was torpedoed off the island and 268 passengers were killed, leaving only 68 survivors.

The benevolent asylum closed in 1946 causing significant unemployment on the island and land was surveyed for the town of Dunwich.

In 1947, a vehicular ferry service was established. This year also marked surf life savers patrolling the beaches at Point Lookout. Stradbroke Ferries, one of the major transport ferries to the island, established a regular service to Dunwich in 1964.

Sand mining was established when Zinc Corp began mining mineral sand in 1949 on main beach, with the first shipment from the island in 1950. This solved the unemployment problem that had begun to form. On Main Beach seams of mineral concentrated by wave action were shovelled by hand at low tide into old ex-army Blitz trucks and other four-wheel-drive vehicles which transported mineral across the island to Dunwich. Subsequent mining along the beaches and dunes was also carried out by Associated Minerals Consolidated (AMC) and Titanium and Zirconium Industries (TAZI), using dredge operations and a trans-island ropeway to transport the mineral back to Dunwich.

In 1966, Consolidated Rutile Limited (CRL) commenced operations using dry mining methods at the Yarraman deposit, taking advantage of the high mineral concentrations in the dune caps in the central part of the island.

In 1978, CRL commissioned its first dredge and concentrator to mine the Bayside ore body. This plant was subsequently moved to the Ibis ore body in 1996–97 and into the Enterprise ore body in 2004. In 1985, another operation was commenced at the southern end of the island on the Gordon ore body. In 1999, it was moved to re-mine the Yarraman ore body. CRL's Amity mine (started in 1978 by AMC and bought in 1987) was closed and final revegetation commenced in 1992.

Sibelco Australia purchased CRL in 2009. Currently, mineral sands mining operations are taking place at Enterprise and Yarraman mines. In July 2011, the Queensland Government finalised arrangements that allow the mining company to continue mining at the Enterprise mine site until 2019 but on a restricted mine path. Yarraman is due to close in 2015.

Silica mining also occurs on North Stradbroke Island. Sibelco also owns and operates a Silica mine at a location known as Vance. Vance will be the last mine to close in 2025.

1.2 Natural environment

The island is the second largest sand island in the world after Fraser Island. The cultural and ecological importance of the island’s environment has been recognised regionally, nationally and internationally. It features very high conservation values and a diversity of habitats including wetlands and endangered heathlands, freshwater lakes, rainforests, old growth forest and woodlands.

The island’s wetlands, foreshore swamps and interconnecting land are all listed Ramsar Sites and habitats for near threatened, vulnerable and endangered species of flora and fauna. Threatened species found on the island include the Cooloola sedgefrog and black-neck stork, while endangered species include the little tern. All seven mangrove species found in Moreton Bay are also found on the island providing a nursery habitat for fish and invertebrates. Seagrass beds associated with the island support dugong and green turtle feeding.

The value of the environment is intrinsic and profound to the culture of the Quandamooka People. As stated in the Quandamooka Aboriginal Community Profile and Action Plan, 'We are the people of the sand and water…caring for country is our business. It always has been and always will be' [p.5].

Much of the discussion around the environmental values of the island has focussed on those areas that will become part of the future national park as this initiative will significantly enhance levels of environmental protection across the island. A large majority of island residents place significant value on the natural environment within which they live. While there is a broad range of views about the appropriate future for the island, a common theme is a deeply held commitment to protect the environment, whether it is on or off national park.

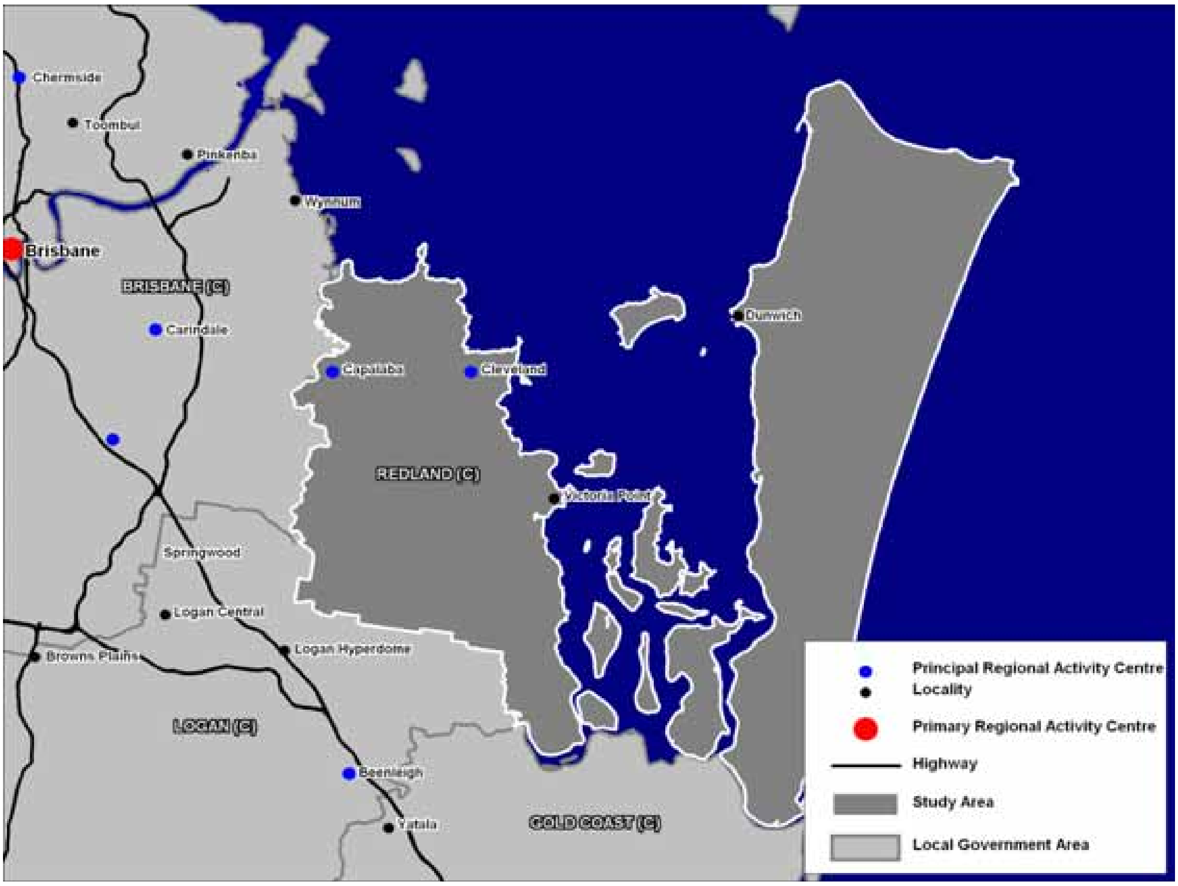
This is linked to a broad recognition of the need for environmental sustainability on the island—an issue that is highlighted in the peak of the tourist season when concerns around environmental impact, sewerage capacity, and social disruption come to the fore.

1.3 Geography

The island is located off the coast of South East Queensland, approximately 40 kilometres from Brisbane. It is part of the Redland City Council Local Government Area. The island is 12 kilometres across at its widest point, and 38 kilometres from north to south. Directly north is Moreton Island, another sand island which is predominantly national park and an attraction for recreational tourists.

The following map shows the location of North Stradbroke Island in relation to Brisbane.

Figure 1. Context map—North Stradbroke Island



Source: SGS Economics and Planning North Stradbroke Island Economic Development Strategy/Scoping Paper Department of Environment and Resource Management P. 4 2.2 Settlement Pattern

There are three main townships on the island—Dunwich, Amity and Point Lookout. They are all located on the northern half of the island, and on the coastline. There is also a small settlement at Flinders Beach. Each township has a unique character.

Dunwich is the largest township on the island and hosts 40 per cent of the resident population. The majority of services and facilities are located at Dunwich, and it is the access point for the passenger and vehicular ferries which provide the only public access to the island (apart from access via the airstrip southeast of Dunwich). The island’s schools and preschool are also located at Dunwich and it has a sports club and field.

The second largest township on the island is Point Lookout which is located on the north east tip of the island and is home to approximately one third of the resident population. Point Lookout is the major tourist destination on the island, and is the location of some of the best surf beaches including Cylinder, Frenchman’s, Main, and Deadman’s Beaches. The township is located approximately 20 kilometres from Dunwich and there is no harbour facility. The population of Point Lookout tends to fluctuate dramatically between holiday periods, and contains a high proportion of tourist accommodation. There is also a substantial number of houses which are privately owned and are used only occasionally during holidays or weekends (i.e. not for general rental). The proportion of holiday homes has been estimated at 30 per cent while census counts of unoccupied dwellings indicate that approximately 50 per cent of dwellings fall into this category.

The third township, Amity, has a village feel and is less of a tourist destination. It is home to about one-fifth of the population and is essentially a small fishing village. While the beaches at Amity are erosion prone, Flinders Beach is a popular destination approximately three kilometres to the east of Amity. The remaining resident population (approximately six per cent) of the island is located at either Flinders Beach or in other housing between the townships.

2 The Queensland Government vision

This strategy has been prepared to support the Queensland Government's June 2010 announcement of its vision for the island, which includes the following outcomes:

- the resolution of native title through an Indigenous Land Use Agreement (ILUA) with the island's Traditional Owners, the Quandamooka People
- the creation of national park across 80 per cent of the island by 2027—including 50 per cent by the end of 2011
- the cessation of sand mining
- the transition towards a sustainable economic future for the island.

The Queensland Government has undertaken a number of initiatives to facilitate its vision. In particular, the passage of the *North Stradbroke Island Protection and Sustainability Act 2011* in April 2011 secured the phase-out of sand mining and facilitates declaration of 80 per cent of the island as national park by 2026 to be jointly managed with the Quandamooka People.

Furthermore, two native title consent determinations by the Federal Court of Australia have recognised the Quandamooka People's rights and interests over land and water on and surrounding the island. As part of the determination process, ILUAs have been negotiated between the Quandamooka People and the State, as well as with other parties with an interest in the land.

The Queensland Government's vision for the island recognises that in order to protect the island's natural heritage, mining must be phased out and that the island economy, as it is currently structured, has been demonstrating signs of strain and decline over the past decade or so. In February 2011, the Queensland Government established the Economic Transition Taskforce (the taskforce), representing a broad range of economic interests on the island, to support the economic transition.

The taskforce is chaired by the Director-General of the Department of Employment, Economic Development and Innovation (DEEDI) with Secretariat support from the Department of Environment and Resource Management (DERM). The work program of the taskforce has been supported by the work of consultants with particular expertise in a variety of areas associated with the island's economic transition. The work of the consultants is being overseen by the ETT and officers within DERM and DEEDI.

2.1 Native Title determination

On 4 July 2011, the Federal Court of Australia handed down a determination recognising the Quandamooka People as the native title holders of North Stradbroke, Peel and Goat Islands and surrounding waters. The Federal Court's determinations recognise the Quandamooka People's rights and interests in their traditional country. This is the first successful native title determination in South East Queensland.

This determination sets out the legal rights and interests that the Quandamooka People have as recognised native title holders of the claim areas. It acknowledges their rights to camp, hunt, fish and gather in accordance with their traditional laws and customs as well as the right to exclusive possession of some areas.

In addition to the determinations, the Quandamooka People have agreed on separate ILUAs with the Queensland Government and Redland City Council. These ILUAs recognise the Quandamooka People's rights as Traditional Owners, custodians and managers of their traditional country, protecting the outstanding environmental and cultural values of the island. The interests of the native title claimants are represented through a Prescribed Body Corporate called the Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC).

The confidential ILUA with the Queensland Government is likely to have direct implications for future industry opportunities on the island in recognition of the Quandamooka People's native title rights and interests. The ILUA is scheduled to be registered in December 2011. Until this time, the Quandamooka People's specific aspirations and industry plans remain confidential and the Quandamooka People reserve the right to enter into any industry planning on a voluntary basis.

A key outcome of the native title process, which has also been given effect by the *North Stradbroke Island Protection and Sustainability Act 2011* is a joint management role that the Quandamooka People will assume with DERM's Queensland Parks and Wildlife Service (QPWS) with regard to the newly created Naree Budjong Djara National Park on the island, under the terms of an Indigenous Management Agreement.

In addition, the strategy presents a range of employment and economic development opportunities for the Quandamooka People through grants of tenure over unallocated State land, revenue sharing arrangements with the State and the management of the existing and proposed national park areas.

2.2 National Park creation

The first stage of the Naree Budjong Djara National Park, which will be jointly managed by QPWS and the Quandamooka People, was declared in March 2011. The new national park currently covers approximately 20 per cent of the total island. The park's name means 'my Mother Earth' to the Quandamooka People.

The timeframes for national park creation are:

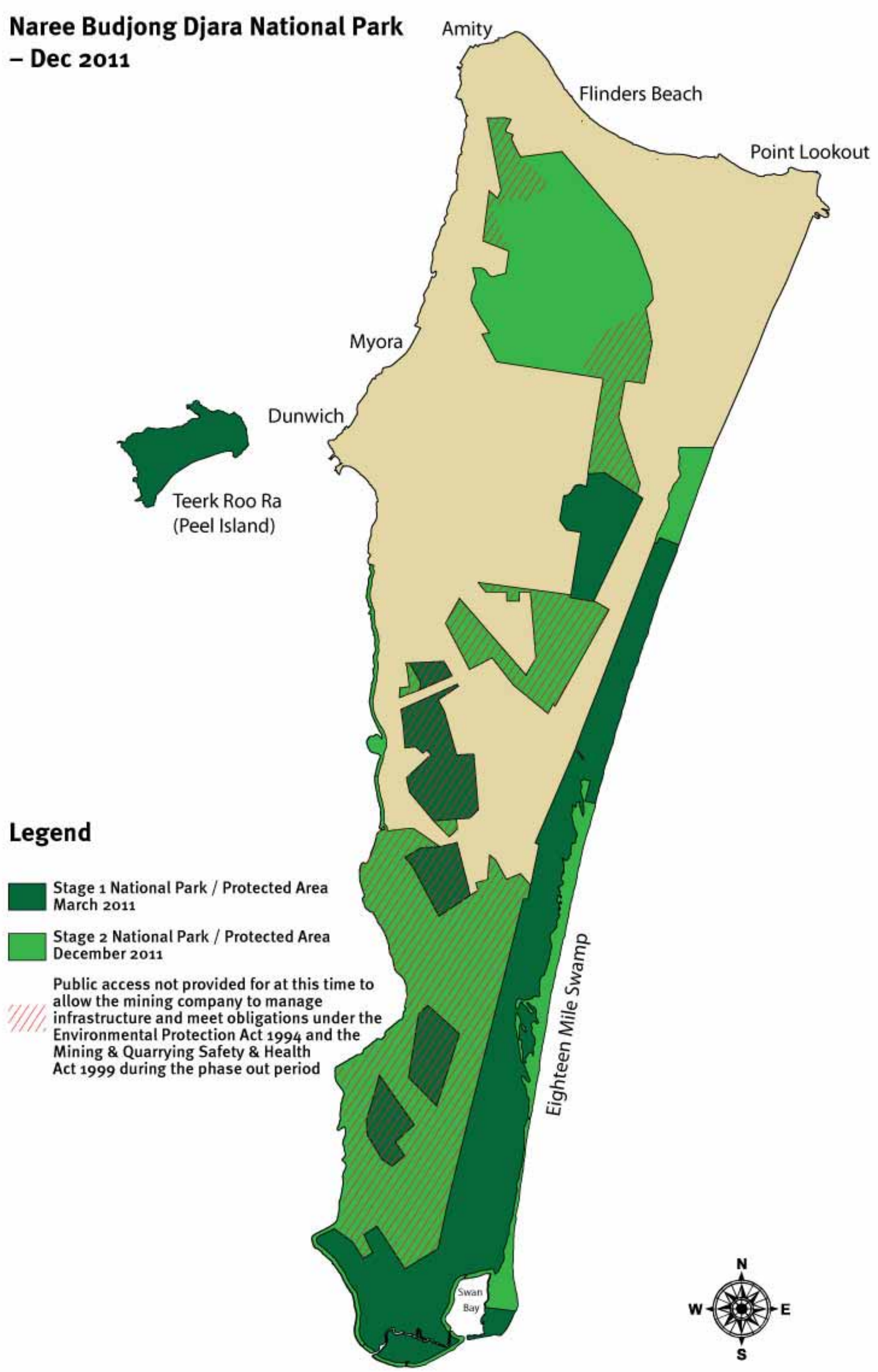
- by early 2011—20 per cent of the island became national park
- by the end of 2011—50 per cent of the island will be national park
- by the end of 2021—75 per cent of the island will be national park
- by the end of 2026—80 per cent of the island will be national park.

The island features places of high conservation value and a diversity of habitats including wetlands and endangered heathlands, freshwater lakes, rainforests, old growth forest and woodland that are home to threatened animal species, including the Cooloola sedgefrog and black-neck stork and little tern. The ancient topography preserves evidence of climatic changes over thousands of years along with remnants of some of the earliest human habitation in Queensland.

The national park will protect these areas for future generations and is expected to raise the profile of the island, especially outside South East Queensland, by offering new nature-based business development opportunities and more recreational opportunities.

Access by the public to the national park is an important factor in increasing economic opportunities through improved visitation and a diversity of experience. Whilst parts of the national park are covered by non-winning leases for which access is restricted at this stage, access and economic flow on benefits will progressively increase as leases expire or are surrendered through the transition period. The following map shows stage two of the national park (50 per cent of the island by end 2011) overlaid by current mining leases.

Figure 2.


Naree Budjong Djara National Park
– Dec 2011
Amity
Flinders Beach
Point Lookout
Myora
Dunwich
Teerk Roo Ra
(Peel Island)
Eighteen Mile Swamp
Swan
Bay
Legend
Stage 1 National Park / Protected Area
March 2011
Stage 2 National Park / Protected Area
December 2011
Public access not provided for at this time to
allow the mining company to manage
infrastructure and meet obligations under the
Environmental Protection Act 1994 and the
Mining & Quarrying Safety & Health
Act 1999 during the phase out period
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2.3 Mining

Sand mining has played a significant role in the island's economy since it was first established in 1949. As well as providing jobs for island residents, sand mining companies have contributed to the community by providing financial and other forms of support to community groups and specific community projects.

In order to protect the island's high conservation values the Queensland Government recently legislated to fast track the end of mining. The legislation enables 80 per cent of the island to be made national park by 2026 and provides timeframes for the phase-out of mining, specifically:

- Yarraman mine to close in 2015 as already indicated by the mining company
- Enterprise mine—the largest sand mine—to close in 2019
- all mining to cease with the closure of Vance—a small silica mine—in 2025.

On 8 July 2011, the Queensland Government finalised the restricted mine path for Enterprise mine, allowing it to operate until the legislated deadline of 2019. The decision will enable the mine to continue to operate while minimising environmental harm and ensuring mine safety. It will guarantee a stable economy for the island in the short to medium term and allow for the transition to a sustainable economic future for the island.

2.4 The need for an economic transition process

The Queensland Government recognises a need to facilitate the island's transition towards a strong, sustainable and green economy given its decision to phase out mining on the island. This provides an opportunity to reinvent the island's economic future to fit with the community's aspirations and contribute to the environmental, social and cultural sustainability of the island.

There has been significant debate about the importance of mining to the island's economy and the implications around its cessation. Views range between:

- concern that the phasing out of mining will significantly increase economic hardship; and
- mining is locking up half of the island and ending it immediately would benefit the community by allowing visitors to enjoy much more of the natural and diverse beauty that the island has to offer.

Regardless of the position taken in relation to this debate, there is substantial evidence to suggest that even with mining, the economy is currently under stress and demonstrates a lack of resilience. This economic transition process—supported by the ETT—aims to identify key opportunities and strategies to develop a sustainable economic base for the island into the future. The strategy represents work completed to date.

3 The regional context

3.1 Moreton Bay and islands

Moreton Bay encompasses many islands which are collectively historically known as Quandamooka. North Stradbroke Island and the island communities of southern Moreton Bay (Lamb, Karragarra, Macleay and Russell), Peel and Coochiemudlo are now all incorporated into Redland City.

The southern Moreton Bay islands were incorporated into the Redlands on 12 May 1973. In the 1960s and early 1970s, much of the island land was subdivided into small allotments. Since then, Redland City Council has restricted further subdivisions and rationalised planning so that the significant environmental and cultural values of the islands and surrounding Moreton Bay are preserved. The islands are serviced from Weinam Creek Marina, Redland Bay, on the mainland by passenger ferry and vehicle barge.

3.2 The role of Redland City Council (RCC)

The RCC, like any local government authority, has a charter to serve its local community. This includes providing governance and support to help its businesses and residents adjust to economic change and to identify and capitalise on opportunities for economic growth and development as they arise.

3.2.1 Redlands community plan

The vision and aspirations of the Redlands community, covering the many distinct communities on the mainland and the islands have been articulated by the Redland community through Redlands 2030 Community Plan and subsequently through council’s corporate plan. Eight vision outcome areas contained in these plans speak directly to the development of an economic transition strategy for North Stradbroke Island:

- healthy natural environment
- green living
- embracing the bay
- Quandamooka Country
- wise planning and design
- supportive vibrant economy
- strong and connected communities
- inclusive and ethical governance.

'Embracing the bay' describes a strong future for the islands where island communities thrive, and strategic plans and visions developed with the community guide successful regeneration, healing and wellbeing. Aboriginal stewardship and the role of Traditional Owners and members of the Aboriginal community in managing natural and cultural resources are acknowledged through various Quandamooka Country goals. The vision for a supportive and vibrant economy includes environmentally responsible businesses, technology-based industries, a marine research centre, Indigenous knowledge centre and flourishing educational ecotourism.

Redland City Council has various strategies in place to deliver on the Redlands 2030 visions. The tourism strategy contains objectives to ensure the region’s economy grows through a diverse nature-based tourism industry with investment in tourism infrastructure and partner industries and increasing the value of tourism through improving the environmental and cultural values of the region. The cultural strategy embraces a wide view of culture and affirms its role in protecting and developing the strengths of Redlands’ places and communities. Maintaining the viability of ecosystems by retaining remnant and non-remnant vegetation on the island and increasing the koala population are key outcomes of council’s Biodiversity Strategy.

The economic future and contribution of the Aboriginal community is outlined in the Quandamooka ILUA, Council's Indigenous Community Policy and Action Plan and the Quandamooka Aboriginal Community Plan. Dedicated commitment by all levels of government to relationships and partnerships with the Quandamooka People will see the delivery of priorities such as Aboriginal managed enterprises including the Stradbroke Holiday Parks, an aboriginal cultural and interpretative centre, indoor and outdoor sporting facilities, employment and training opportunities, educational tourism and educational product development, Indigenous business support and development, tourism activities and services, and employment programs that maintain the positive contribution of Quandamooka People to the community and reduce their level of disadvantage.

The Redland Planning Scheme local level strategy for North Stradbroke Island/Minjerribah commits to precluding areas of high conservation value from development. The island will rely on the mainland and Cleveland as the principal regional activity centre for higher order services and facilities with island centres providing community services and facilities. Local area planning will guide the development of these centres with a range of complementary activities to service the island as a whole as well as projects listed in the Redlands Social Infrastructure Strategy to build the island community. An efficient and sustainable water transport system between the island and the mainland is essential.

The 'Seven C's Connection' strategy identifies the declaration of the national park as both an opportunity and a challenge to connect people, plants and animals across private, council and public land—with the opportunity to create a set of major green corridors and pathways across the island and the challenge to ensure that bicycles are permitted in the national park. Council's policy for a 'child and youth friendly city' also contains opportunities and challenges for a child and youth friendly Stradbroke Island—to make the island a better place for families and children and for the future of local children and young people, as well as the frequent family visitation sector.

3.2.2 Priority initiatives for North Stradbroke Island

The council has provided further information to the Economic Transition Taskforce by identifying a number of breakthrough and priority projects which are infrastructure enablers, such as:

- marine transport infrastructure (e.g. Toondah Harbour and Dunwich)
- tourism infrastructure (e.g. tracks, trails and pathways, whale watch facilities, welcome and information)
- cultural infrastructure (e.g. Minjerribah Indigenous knowledge centre, North Stradbroke Island Museum)
- social infrastructure (e.g. sport, recreation and community facilities, youth and family facilities, employment and training programs)
- civil infrastructure (e.g. town centre, roads and pedestrian pathways, foreshore management)
- infrastructure to address island access, isolation and cost (e.g. affordable transport subsidies, internet communication).

A more detailed schedule of infrastructure requirements identified by the Redland City Council for consideration by the taskforce is included (Appendix 1).

Redland City Council endorses coordinated planning, investment and partnerships with other levels of government, the community and private enterprise to achieve its community plan and policy commitments for the economic transition of North Stradbroke Island to a strong and thriving island future.

Council already commits capital and operational resources to strive to achieve the goals espoused in the Redlands 2030 Community Plan, but the vision of sustainability created by the Queensland Government necessitates a higher level of investment.

Given the type and quantum of investment associated with both social and physical infrastructure and the processes used by local, state and commonwealth governments to determine the best allocation of resources, the Economic Transition Strategy does not make specific recommendations about what infrastructure should be funded. Rather, it supports the ongoing role of the taskforce in identifying physical infrastructure priorities from an island perspective and the potential oversight by the Ministerial Reference Group of a community needs analysis to identify future social infrastructure needs.

4 Socio-economic profile—issues, challenges, opportunities

4.1 Economic foundations

Governments do not drive economic development, but they do influence the pre-conditions for a competitive and prosperous regional economy.

The pre-conditions for any viable economy are:

- **people**—the reason why society seeks a prosperous economy is to benefit the people who live within that society. There is also the need to provide workers with appropriate skills so they are available to meet the needs of local industry.
- **infrastructure (physical and social)**—physical infrastructure such as transport, sewerage and water, internet services, phone services, and community facilities are critical for economic activity to take place. Social infrastructure is necessary for the wellbeing of the community as well as creating conditions that will sustain the workforce.
- **land**—all economic activity is subject to the availability of land and in particular, land which is physically suitable and appropriately designated for the proposed purpose.

4.2 People

Within an economic context, people are important. Traditionally, economics focuses on people as labour. In this sense people play a key role because of their contribution to economic activity. The approach adopted in this strategy is to place an emphasis on the need for the economic transition to benefit the whole community through improvements associated with the quality of life as well as economic prosperity.

Within the context of the island, there are some key issues that emerge around its population and the relationship between the community and economic activity. These can be summarised as:

- the predicted level of population growth and how the relationship between population growth and economic prosperity should be managed given a commitment to environmental sustainability
- the significant proportion of the population that are of Aboriginal and Torres Strait Islander descent and the associated issues of social and economic disadvantage which are critical to the future wellbeing of the island community
- the significant disparities in the levels of wealth between different townships which raise broader issues around social equity
- the island’s comparatively large aging population which has significant implications for both the need for social infrastructure and the availability of labour
- levels of education and training are closely linked to the economic opportunities within any community and are therefore critical to the island’s future.

The following section seeks to draw out data that can provide the basis for an informed discussion about these issues and their implications for the island’s economic future.

4.2.1 Population

One issue that has generated much speculation is around future expectations of population growth on the island, and the potential for either population growth or decline. Debate tends to focus on the tension between the benefits of population growth, in terms of outcomes such as increased capacity for service provision and greater stimulus for the local economy, and the costs associated with this growth, particularly in relation to environmental sustainability. It is widely accepted that a decline in population will be problematic in terms of economic sustainability—as the small size of the island’s population is considered a limiting factor.

Snapshot

In the 2006 Census, the resident population of the island was recorded as 2016 (usual residence data). Most of the population lives in the three main townships, Dunwich (804 people), Point Lookout (669 people) and Amity Point (408 people). The number of people on the island at any time varies considerably due to the non-resident population (e.g. visitors, temporary workers, tourists). During peak tourist periods of Christmas/New Year and Easter there have been estimates of up to 30 000 people on the island, although a more conservative estimate of numbers at these times suggests a number upward of 10 000.

A snapshot of current data available regarding levels of population on the island indicates a small decline between 2001 and 2006, which is in contrast to both Redlands and Queensland which experienced a significant increase (see Table 1). This decline of around 1.3 per cent per year confirms the previous trend between 1996 and 2001.

Table 1. Population (place of usual residence), 2001 and 2006

	NSI	Redlands	Qld
2001	2145	114 486	3 522 044
2006	2016	127 629	3 904 532
% growth	-6.4 %	11.5 %	10.9 %

Source: ABS Census 2001 and 2006

The likelihood of significant population growth in the foreseeable future is not great. There are a number of local and state government planning documents that include estimated population growth. It should be noted that these figures are estimates only—as such, they should not be treated as either targets or caps. The most detailed analysis is included in the draft Redland City Council's Local Growth Management Strategy 2008, which identified the current number of residents on the island to be 2275 and anticipated population growth of 895 in the period to 2026 with the majority of the growth located in Dunwich (an increase of 625 people).

These Redland City Council estimates were made during a period in which South East Queensland was experiencing extremely high levels of population growth and that trend has now slowed significantly. Therefore, it would be reasonable to consider the estimates are at the upper level of population growth in absence of any other significant changes occurring on the island.

Challenges and opportunities

The key challenge is to get an appropriate balance between retaining sufficient population levels to allow for economic sustainability while at the same time ensuring any population increase does not occur at the expense of environmental sustainability. For example, there is a broad view within the community that population levels during peak periods could not be sustained all year round due to increased levels of social and environmental impact.

There are a number of mechanisms available to governments to manage population growth, including regulating land availability through local and state government planning instruments. A land use planning study will be undertaken to investigate whether an increase in population could be accommodated within the current township expansion areas and other areas being assessed as being suitable for residential development. This study will also review the current planning controls which have limited land development on the island in recent years.

The character of the economic activity that is encouraged on the island will also influence whether any population increase is more broadly sustainable. For example, a large tourism resort encouraging a large number of tourists in peak periods is likely to be unsustainable, while low impact camping opportunities targeted at attracting smaller numbers of visitors throughout the year is more likely to be consistent with an environmentally sustainable future.

4.2.2 Quandamooka and Aboriginal and Torres Strait Islander population

The island is unique in that it has a high proportion of Aboriginal and Torres Strait Islander (ATSI) residents close to Brisbane. This reflects the fact that the Quandamooka People have never relinquished sovereignty over their land and sea country, have had continuous occupation of the island, and have therefore been able to retain their distinctive culture.

Snapshot

The 2006 Census identified 363 ATSI residents on the island which is over 18 per cent of the total population. While the island's non-Indigenous population decreased between 2001 and 2006, the ATSI population increased (by 26 persons). It should be noted that this data may be influenced by general inaccuracies in the Census count as post-censual surveys indicate there is typically a net undercount for ATSI people in the order of five to 10 per cent across Australia.

It is therefore likely that the Quandamooka Community Plan's approximation of ATSI population at around 500 is a more accurate figure. Most of the Indigenous population (304 persons or 84 per cent) live in Dunwich where they represent 38 per cent of the total local population.

The ATSI community on the island has a higher level of socio-economic disadvantage than other island communities. According to Indigenous Coordination Centre data, only 50.5 per cent of the ATSI people on the island are in work, the fourth lowest participation rate in the region and unemployment is high at 13.6 per cent. A third of the community works 25 hours a week or less.

The 2006 Census shows the average income of an ATSI person on the island is between $200 and $300 a week; with 28 per cent earning between $150 to $249 a week compared to the Australian average wage of $466. There are relatively fewer middle and higher income Indigenous people on the island with 19 per cent earning more than $400 a week compared with 42 per cent for the non-Indigenous population.

Challenges and opportunities

The Quandamooka People provide a wealth of cultural, social and environmental management expertise, which is considered a significant economic asset for the island community.

The Quandamooka People and ATSI community on the island continue to engage in a high degree of self-management in areas such as health, cultural heritage management, land and sea management, housing, employment and community development. This is evidenced in a contemporary way through the number of Aboriginal community organisations, many of which provide service to the wider community.

Following the Native Title determination in July 2011, it is anticipated that the Quandamooka People's aspirations for social, cultural, economic and environment initiatives, and other opportunities in line with the Quandamooka People's native title rights and interests, can now be progressed.

4.2.3 Age profile

The age profile of a population has significant economic and social implications. In particular, an ageing population means fewer workers are available and there increasing demands for social services, particularly in relation to health services and aged care. It is also associated with a higher demand for low maintenance accessible dwellings.

Snapshot

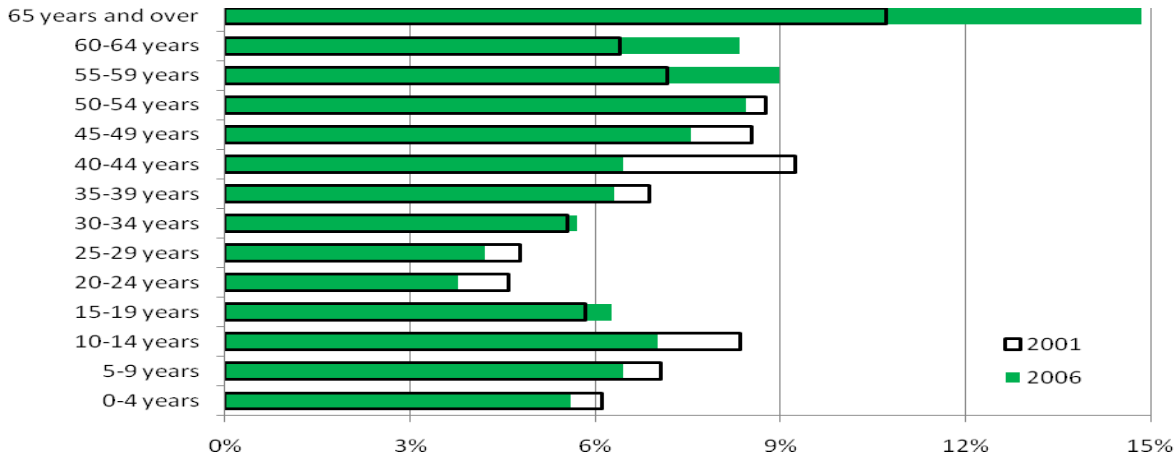
The age profile of the island indicates that the local population has aged since 2001. The resident population over 55 years of age increased as a proportion of the total population and the proportion of residents aged 65 years and over grew from 10.7 per cent in 2001 to 14.9 per cent by 2006.

The median age on the island was 43 in 2006 compared to the Queensland average of 36. Geographically there is a very wide spread in median age with it being 59 years in Amity, 44 years in Point Lookout and 38 years in Dunwich.

While the working age population (32.8 per cent) is not very different to the rest of Queensland (33.5 per cent), it is projected to decrease significantly to approximately 21 per cent by 2026.

Over the coming 20 years the larger geographical area of Redland City Council is projected to age with the median age increasing from 38 to 46 (compared with 36 to 40 in Queensland). This ageing will be particularly prominent in the 50 to 64 age group where a doubling of the population is expected. Already over the past four years to 2009 the population has aged quickly with a 33 per cent increase in the number of people claiming a Centrelink age pension in the Redland region.

Figure 3. North Stradbroke Island Age Distribution, 2001 and 2006



Source: ABS Census 2001 and 2006

Challenges and opportunities

The age profile on the island and the increasing trend towards an aging population indicates that there is a potential shortage of people of working age and an increased strain on, and future demand for, social services, particularly in relation to health care. The older age structure may provide growth opportunities for aged care based industries and occupations such as nursing staff and carers.

These future older residents will need transport to and from services such as hospitals, which may provide opportunities for transport services.

4.2.4 Workforce participation

The level of workforce participation in any community is critical to generating economic activity. As the island is isolated, with significant population growth considered unlikely (and undesirable) and an aging population, levels of workforce participation will be critical in the future.

Snapshot

The level of workforce participation amongst island residents is slightly lower than the Australian average. In 2006, 55 per cent of the population aged over 15 years was in the labour force compared to the Queensland average of 62 per cent. Dunwich has a higher labour force participation rate (59.3 per cent) which is likely to be due to the fact there is a high proportion of mining workers residing in the township.

While unemployment levels are actually quite low (3.3 per cent compared with the Queensland average of 4.7 per cent), so too are levels of full time work (28.6 per cent compared to the Queensland average of 38.1 per cent) reflecting generally high levels of part-time workers on the island (21.3 per cent compared to the Queensland average of 17.1 per cent) and associated lower levels of income. One of the key contributors to these statistics is the level of underemployment within the ATSI community which is reinforcing economic disadvantage (see section 4.2.2). The majority of the current island workforce is male (55 per cent).

The weekly median individual income of island residents ($397) is 17 per cent lower than the Queensland average ($476), with significantly lower averages in the Amity Point ($376) and Dunwich communities ($384). Point Lookout has a higher median weekly income ($459) which is reflected by the relatively higher portion of middle and higher earning individuals (41 per cent earning $400 a week or more) compared with 34 per cent for both Amity and Dunwich.

Based on income data from taxation returns in 2008–09, the island had an average annual taxable income of $47 735 which is 12 per cent lower than the Queensland average. Growth in taxable income is also lower with 38 per cent growth since 2000–01 compared with 55 per cent growth in Queensland. Island residents paid marginally less tax (19 per cent of average taxable income) compared with Queensland (21 per cent).

The relatively lower median individual income level may be due to the larger proportion of older people on the island. It is likely that retirees are living off superannuation rather than employment income.

Census statistics from 2006 also highlight the disparity between the average incomes of workers in the mining and accommodation and food service sectors (see Table 2). The average gross weekly income of a mine worker is over double that of an employee in the accommodation and food services sector.

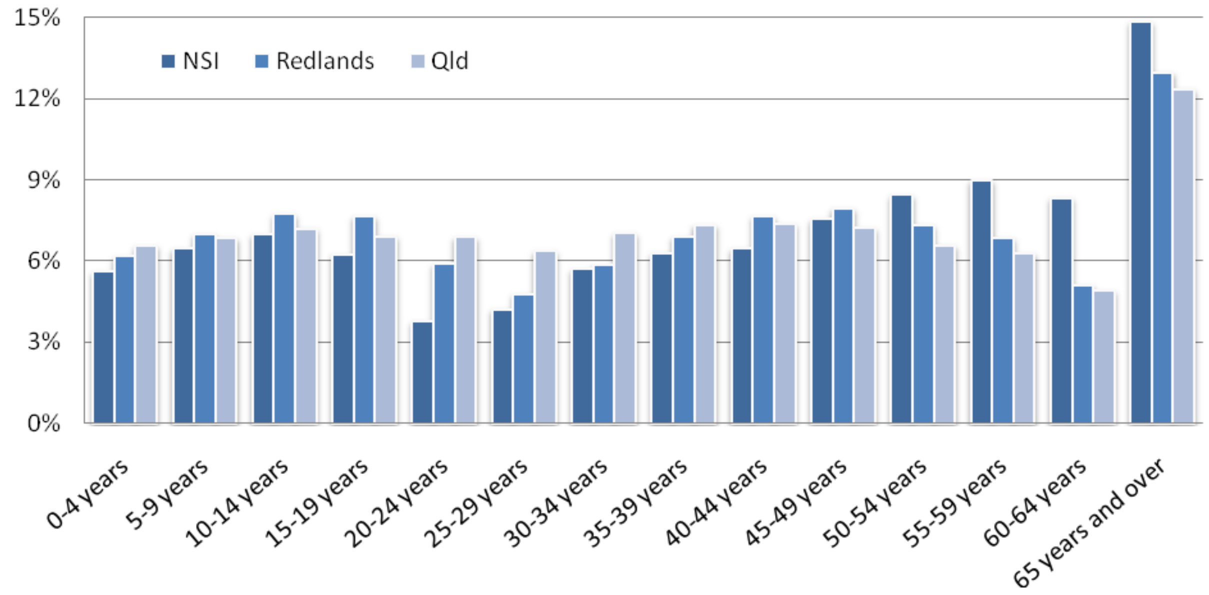
Table 2. Gross individual incomes by sector, 2006

Gross individual incomes ($ per week)		
	Mining	Accommodation and food services
Average 2006	1308	564

Source: ABS Census 2006

Compared to Redlands and Queensland, the age profile of the island shows there are less people of working age, particularly in the 15–44 year old range (see Figure 4). The island has a relatively higher proportion of residents aged over 50 years and lower levels of people aged between 0 and 14 years. The low proportion of young people on the island may reflect a number of factors, including limited work opportunities and a high cost of living. This may impact on the availability of local workers in the future.

Figure 4. Age distribution, 2006



Source: ABS Census 2006

Challenges and opportunities

Island residents have identified the lack of full-time and varied employment opportunities on the island as leading to residents moving off the island, either on a daily basis for work, or on a permanent basis. With the phase out of mining, and without appropriate economic growth over the next eight years, there is likely to be a reduction of the gross income from employment on the island as well as a further increase in competition for available jobs. Expansion of existing sectors or emergence of new industries, coupled with appropriate education and training opportunities can assist in increasing the supply of local workers and the availability of relevant jobs.

By growing full-time, well paid jobs and attracting diverse employment opportunities, the community can reap the benefits of an improved economy and quality of life. Encouraging young people to stay on the island and providing appropriate education and employment opportunities will also be critical.

4.2.5 Indices of social and economic disadvantage

The relative 'disadvantage' of a particular community provides a sense of how the population compares to the rest of Australia. This section uses Socio-Economic Indices for Areas (SEIFA) as a way to compare the social and economic well-being of the island community compared to other communities in Australia.

- **Socio-Economic Advantage and Disadvantage**—provides an overall impression of levels of advantage and disadvantage in the community derived from information such as income levels and educational background.
- **Index of Economic Resources**—focuses on economic information like the income, housing expenditure and assets of households.
- **Index of Education and Occupation**—focuses on educational and occupational characteristics of communities, like the proportion of people with a higher qualification or those employed in a skilled occupation.

The information is recorded to identify where a community sits relative to the rest of Australia. The lowest 10 per cent of areas are given number of one, the lowest 20 per cent given number two and so on up to the highest 10 per cent of areas which are given number of 10.

Snapshot

As Table 3 clearly indicates, overall the island is associated with a very high level of disadvantage as it is in the lowest 30 per cent of areas in Australia. Significantly, this disadvantage is even higher in Dunwich, with Point Lookout sitting in the midway range compared to the rest of Australia. Economic resources are particularly poor in both Dunwich and Amity.

Table 3. SEIFA Deciles by census collection districts and post code area

Locality	Census collection districts	Advantage and disadvantage	Economic resources	Education and occupations
Point Lookout	3202902	6	6	7
	3202907	4	3	6
	3202908	6	4	6
Amity	3202903	3	2	2
Dunwich	3202904	2	2	4
	3202906	2	2	2
NSI (Post Code 4183)		3	2	4

Source: Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2006

Challenges and opportunities

The Economic Transition Strategy recognises the disadvantage that currently exists within the island community. As economic resources are generally low, the focus must be on increasing labour force participation (managing employment and underemployment) and identifying job opportunities that are relatively well paid. Given the island's status with regard to education and occupation, further work is clearly required to support educational opportunities (as discussed below).

4.2.6 Educational level

It is broadly recognised that a strong and resilient local economy requires complementary educational opportunities. Statistics indicate that, generally speaking, education levels on the island are below the average in the Redlands district and Queensland.

Snapshot

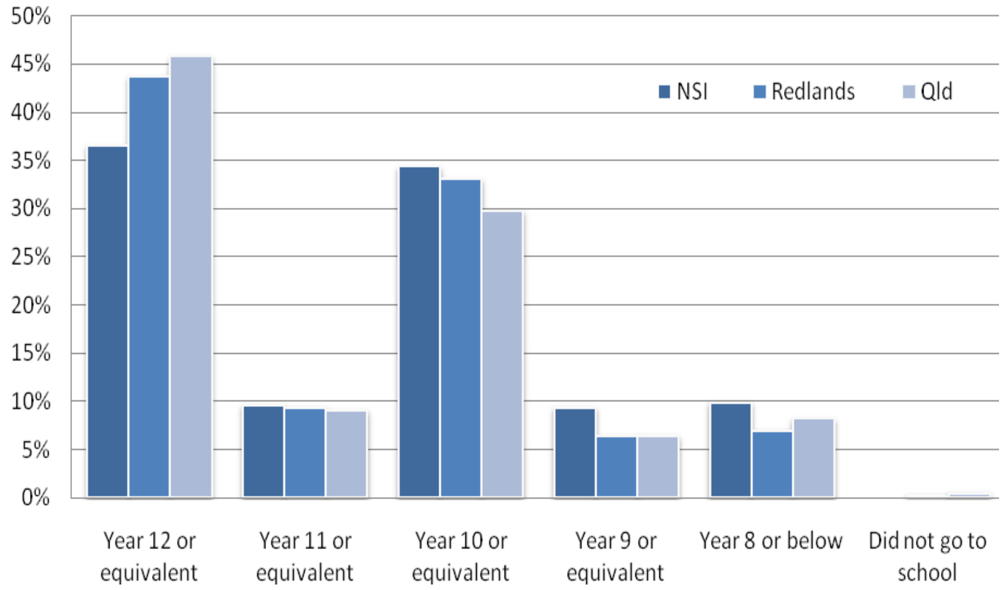
Education levels on the island are generally low. This is particularly evident in the number of island residents who have completed year 12 when compared with the Redlands district and the Queensland average (see Figure 5).

There is both a state primary school and a high school located in Dunwich. In 2011, 132 students were enrolled in the primary school and 20 enrolled in the high school (which only caters to students until year 10). Year 11 and 12 students receive a transport subsidy to attend schools on the mainland. Approximately 45 per cent of the student body on the island is of ATSI decent and there has been a major decline in the proportion of non-Indigenous enrolments since 1997 (from 72 per cent in 1997 to 55 per cent in 2008).

While tertiary education levels for the island are slightly above the Queensland and Redlands district averages, this is mainly at a certificate level (see Figure 6).

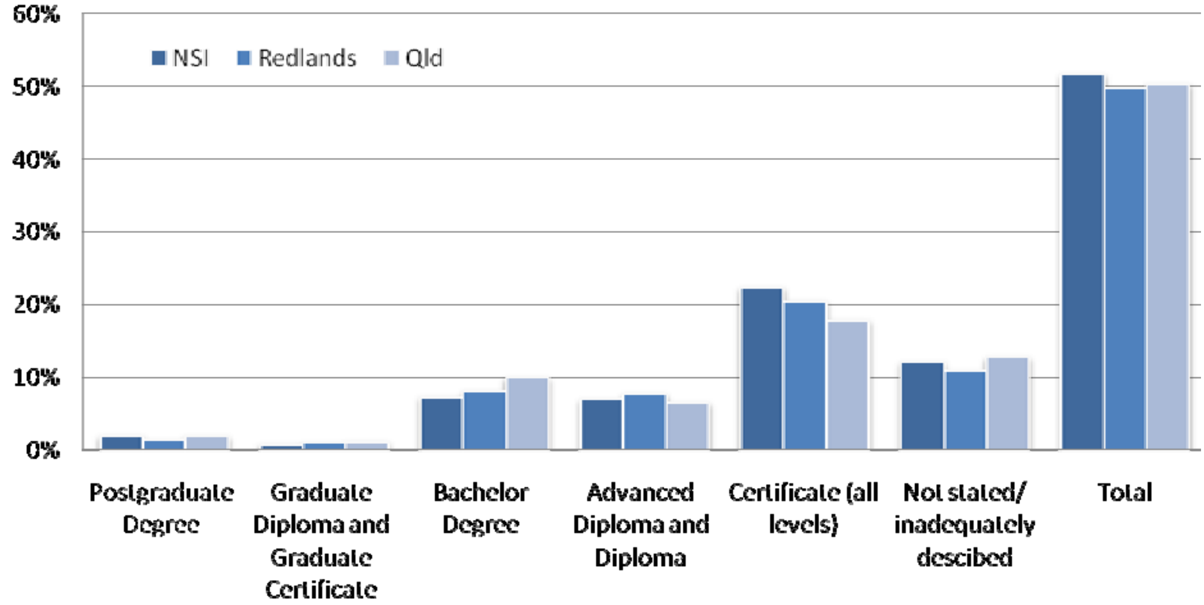
The lower level of education on the island may be reflective of the relatively high proportion of ATSI people who traditionally have a lower level of education. Fewer Indigenous people (10 per cent) on the island have completed year 12 than non-Indigenous people (32 per cent).

Figure 5. Highest level of schooling (15 years and over), 2006



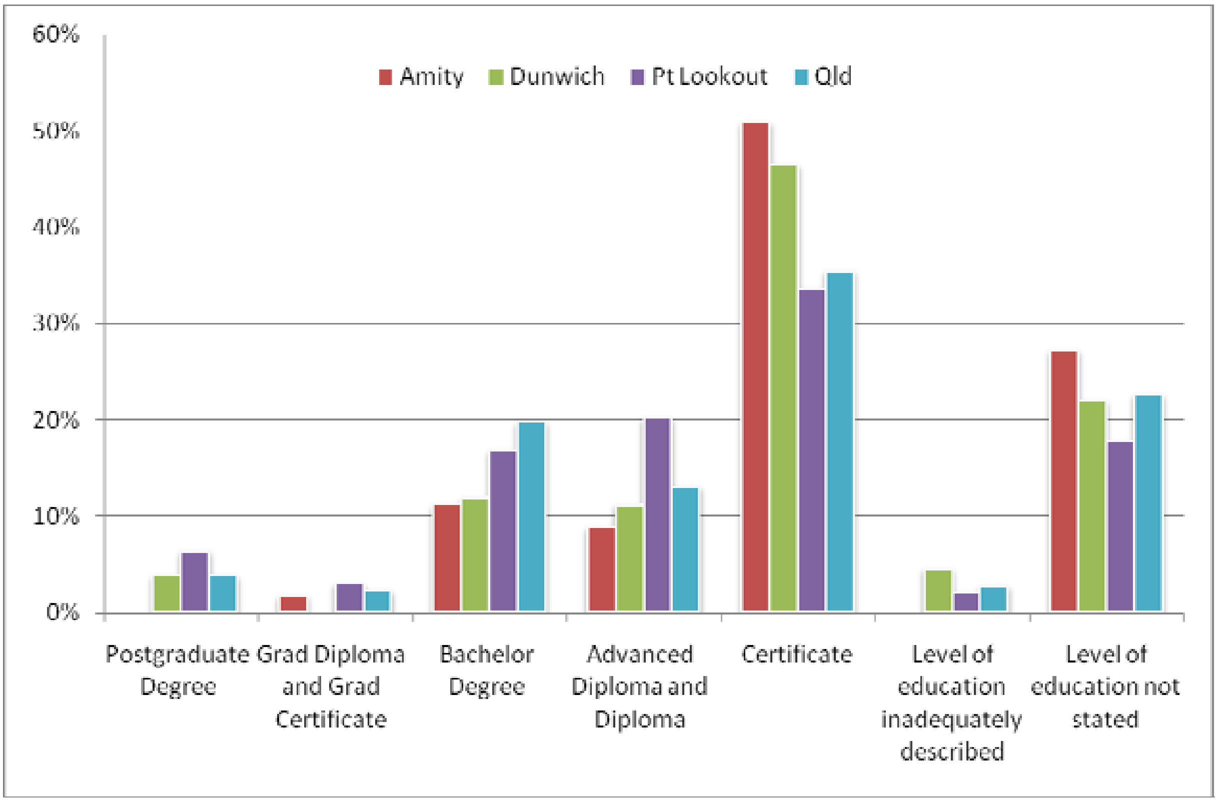
Source: ABS Census 2006 *Excludes 'not stated'

Figure 6. Non-schooling qualifications (percentage over 15 years), 2006



Source: ABS Census 2006

Figure 7. Non-schooling qualifications (percentage over 15 years), by town, 2006



Source: ABS Census 2006

Island residents have identified key barriers to education and training participation. These include the costs and time associated with transport and accommodation for courses on the mainland, as well as the lack of access to facilities including computers on the island.

The island is the site for some existing, though small-scale, businesses involved in education and training services. The two most substantial are the hosting of field trips for Year 11 and 12 students at the Moreton Bay Research Station and school science camps for primary and up to Year 10 students, many of which are organised through Stradbroke Holidays. These have specific ‘island’ activities in the curricula for the camps and field trips.

A range of other activities occur, including group visits by overseas students from private colleges and public universities. It is difficult to quantify these and they do not seem to have any specific island content.

While jobs in education are not as highly paid as mining jobs, they are more secure and better paid than jobs in tourism. Furthermore, the ratio of female to male earnings is higher for education compared with accommodation and food services and mining. Expanding the education industry on the island has the potential to lift the prevailing standards in the local labour market, including reducing gender inequalities and advancing Indigenous employment.

Further information on the availability and suitability of training on the island, including an inventory of existing educational facilities and services, is available at <www.educationisland.net>.

Challenges and opportunities

The availability of a skilled and adaptable workforce is a critical factor in the development of a viable economy. The provision of increased access to education and training programs with meaningful employment outcomes will be essential in encouraging participation in post-schooling education.

Identifying ways of encouraging students to stay on the island to support both the primary and high school should also be recognised as a priority and to support the schools in their endeavours to provide a high quality education.

The education and training sector has emerged as one of the industries with potential for expansion on the island because it can contribute economically as a source of income and employment. Education can help tourism to increase the range and quality of its products, especially those that involve visitors learning about the island.

The small size of the island population and the limited range of industries and employment opportunities may limit the scope of education and training for residents.

Construction trades and computer skills are two areas where training could be implemented in the short term. The objective in construction may be to provide opportunities in a more diverse range of trades than currently exists. Particular emphasis could be placed on meeting learning needs of Indigenous youth.

There is also potential to expand the number of school camps and field studies which would increase income and employment from the education and training sector.

One short-term need is to recognise and support the re-training needs of any mine workers that are seeking opportunities to transition to other employment should they choose to remain living on the island.

4.3 Infrastructure

Infrastructure underpins all economic activity and is fundamental to a sustainable economy. There is ‘physical’ infrastructure such as roads, water and sewerage, energy, transport and telecommunications, and ‘social’ infrastructure such as education, health and community services.

4.3.1 Physical infrastructure

Adequate physical infrastructure is critical to the level of economic prosperity enjoyed within any particular region. It is considered a key enabler for industry growth and attracting business investment. A lack of appropriate infrastructure is recognised as a constraint to business investment through increasing costs and impacting on market viability.

While the prime responsibility for the provision of basic infrastructure lies with government, historically the island community has also had the support of private industry, and in particular, the mining industry, in the development of physical and social infrastructure.

Snapshot

The basic physical infrastructure needs of the island are similar to most isolated communities, with the main concerns being focused on connectivity in terms of transport and telecommunications. Other areas of concern that have been raised by residents are the sewerage capacity, internet service provision and mobile phone coverage.

Transport and connectivity

Affordable transport has been identified as a key barrier to addressing the island's relative isolation and accessibility.

The most common form of access to the island is via vehicular barge (vehicles and passengers) or water taxi (passengers only). Services are currently at hourly intervals between 5.30 am and 7.00 pm. There is a concern that plans to merge the existing two barge operations and the end of mining will result in a significant price increase, as well as a potential reduction in services. The current seat capacity for transport to the island (over two million seats per year) is well in excess of the capacity to other island destinations including Moreton, Fraser and Hamilton which all cater for less than one million seats.

On the mainland the ferry services have connections with regular public transport and on the island there is a bus service that connects with all ferries.

There is also a small airport on the island located six kilometres outside of Dunwich. The strip is 900 metres long and made of gravel and grass. On average, the airport has between 20 and 40 aircraft movements per month—however this can fluctuate, particularly when large wedding parties are flown in. Landing permission is required from the Straddie Aero Club and costs between $10 and $20 depending on the type of aircraft. Membership fees ($120 per year) include landing fees and hangar sites can be sub-leased from Stradbroke Air P/L for an annual fee of $3400 and an initial upfront fee of $3595. The hangar site leases are with the Queensland Government and a number of sites are still available for lease.

The island is a hub for boating and fishing and many people access the island via private vessels. There is a public boat ramp and jetty at Amity and the Little Ship Club at One Mile in Dunwich has a floating pontoon with a ramp access up to the club. There are no boat ramps or jetties at Point Lookout with only beach landing on suitable beaches.

Harbour facilities

The upgrade of facilities at Toondah Harbour has been identified by Redland City Council as its highest strategic priority project (Priority projects for the Redlands: Redlands – to 2030 and beyond, August 2011).

This status reflects the importance of the Toondah Harbour precinct in terms of marine transport facilities, its critical role in providing water based transport, the opportunity it provides as a major redevelopment site, the need for master planning to enable it to become a mixed use development site and the particular sensitivities around the site based on its status as an 'area of state significance' under the South East Queensland Coastal Management Plan.

Sewerage capacity

Redland City Council maintains a sewage treatment plant, pipeline and reservoir at Dunwich on the island. Evidence suggests that the current sewerage facilities are inadequate, particularly with regard to sewer capacity.

Mobile phone service

Residents have raised concerns about poor mobile phone coverage on the island. Mobile phone coverage varies from company to company. Coverage is best around villages on the island and is patchy outside of townships.

Internet access

Census data indicates that the island has significantly lower levels of access to internet at home than for households on the mainland. In 2006, 47 per cent of households on the island had no internet connection, compared with 29 per cent for Redland City as a whole. Only 20 per cent of island residents had broadband connection, compared with 45 per cent for Redlands. Consultation with local residents indicates that the quality of internet connections for the island is also poor. Details of the planned National Broadband Network service for the island are currently being clarified.

Island roads

Road infrastructure on the island includes a 38-kilometre network of sealed roads. Any future extension to the road system will be shaped by the evolving economy.

4.3.2 Social infrastructure

The provision of social infrastructure is essential for the health, social wellbeing and economic prosperity of all communities. It plays an important role in bringing people together, helping form friendships and social support networks, and in helping communities to develop life skills and resilience. A strong and resilient economy requires the provision of a good range of community infrastructure and services to support the community and to attract employees and investment through the development of business networks, providing information and support, assisting in education and training and providing an environment or lifestyle that attracts and retains employees and their families.

Snapshot

In a similar fashion to physical infrastructure, most of the islands' social infrastructure needs are influenced by it being an isolated community. The relative isolation of the population means there is a demand for a wider range of services than those that would be typically be required for a similarly sized community on the mainland in South East Queensland.

Community facilities and services

Based on a comparison against desired standards of services for South East Queensland, the island appears to have a high level of community facilities and services (see Table 4).

Table 4. Audit of community services

Type of facility	Number of facilities	Current rate of provision	Desired standards of service benchmarks	
			SEQ social infrastructure guidelines	Adjusted benchmark
Community halls/centres/ meeting space	4	503	6000–10 000	2000
School	2	2013	10 000–20 000	10 000
Museums	1	2013	30 000–120 000	30 000
Art gallery	1	2013	30 000–120 000	30 000
Cultural centre	0	0	20 000–50 000	20 000
Libraries	3	671	10 000–20 000	10 000
Ambulance	1	2013	25 000–30 000	10 000
Police	1	2013	25 000–30 000	10 000
Fire service	1	2013	25 000–30 000	10 000
Healthcare	3	671	50 000–100 000	50 000
Aged care/respite	3	671	20 000–100 000	10 000
Youth	1	2013	10 000–20 000	10 000
Childcare	1	2013	4000–8000	3000

While the above benchmarking suggests a comparatively high level of service provision, access to services remains an issue, particularly in terms of an equitable distribution of health and community care services across the island.

Key social infrastructure identified as needing further assessment in terms of adequacy includes:

- youth facilities, care and support
- health, mental health and aged care
- education facilities with a technical focus
- library services
- safe and affordable housing.

Minjerribah Knowledge Centre

The Quandamooka People are in the process of establishing an Indigenous knowledge centre on the island (Minjerribah Knowledge Centre) to facilitate the preservation and development of Quandamooka history, language, culture and tradition. A feasibility study was endorsed by the Redland City Council in February 2011 which included a number of recommendations to progress the development of the initiative in partnership with the Quandamooka community.

The council is committed to working with the Quandamooka People, state and federal governments on aspects of the proposal which proposes three key components:

- a self-managed community knowledge centre to support the cultural preservation needs of the Indigenous community
- a public cultural centre or precinct in a prominent position at the entrance to Dunwich designed to support the whole island community as well as presenting Indigenous culture and knowledge to visitors and tourists.
- an online web-based catalogue to protect and organise Indigenous knowledge material in various formats according to the needs and specifications of the owners of material.

The establishment of the knowledge centre would significantly enhance social infrastructure on the island.

Challenges and opportunities

Because infrastructure is typically associated with a 'public good' (both economic and social), governments (commonwealth, state and local) generally take responsibility for ensuring its supply. The demand for new infrastructure is widespread across most communities, and governments’ capacity to meet the demand is limited due to its substantial cost and the current fiscal environment that is under strain at all levels (globally, nationally, statewide and locally).

Prior to government (at any level) making a decision about supporting infrastructure investment on the island there will be a need to be an assessment of its value and consideration given to the expenditure of public money within the context of competing proposals.

The scope of the Economic Transition Strategy does not allow for a detailed infrastructure assessment to be undertaken as part of this body of work. However, the strategy has identified the following infrastructure needs, which should be investigated within the broader context of local, state and commonwealth government priorities:

- harbour facilities at Dunwich and Cleveland
- sewerage capacity
- mobile phone service
- internet access
- roads
- youth care and support
- health, in particular mental health
- aged care
- educational facilities with a technical focus
- safe and affordable housing.

Businesses on the island and the community in general, need to be realistic about the likely level of government infrastructure investment and should therefore prioritise needs by identifying what is critical and what is desirable. Furthermore, there needs to be investigation of innovative and cost effective models of infrastructure delivery such as joint ventures, private–public partnerships, cross-subsidy innovations and private investment.

The small size of the island population base creates particular challenges in terms of justifying community service and social infrastructure investment if considered in isolation from other factors. The case for increased social infrastructure investment needs to be articulated within the context of the isolated nature of the community, the high number of visitors and tourists, and specific issues of disadvantage, particularly in relation to the ATSI population, which all typically heighten infrastructure needs. The Minjerribah Knowledge Centre project clearly demonstrates the significant potential to enhance social infrastructure on the island through innovative initiatives.

While the scope and timing of this strategy does not allow for a detailed community needs analysis, it is clear that such an analysis should be undertaken and could potentially be overseen by the reference group.

The relationship between infrastructure needs and the Planning for Action document (draft action plan) is complex. The draft action plan is premised on a recognition that enhanced infrastructure for the island will promote individual industry action areas. However, the emphasis on sustainability, and improving the island's self-sufficiency, means the draft action plan has minimised its reliance on major investment in infrastructure as a pre-requisite for its success.

There are a number of key physical infrastructure issues that Redland City Council has already identified as requiring further consideration. These include:

- **marine transport infrastructure**—(e.g. Toondah Harbour and Dunwich)
- **tourism infrastructure**—(e.g. Point Lookout Headland–Terrangee paths trails, and associated facilities including world class whale watching facilities, National Park access and associated facilities, Tourist Welcome and Information Facilities)
- **cultural infrastructure**—(e.g. Minjerribah Knowledge Centre, North Stradbroke Island Museum)
- **social infrastructure**—(e.g. recreation facilities, community facilities, youth and family facilities, entertainment facilities)
- **civil infrastructure**—(e.g. town centre beautification, traffic and pedestrian management, foreshore access and stabilisation).

A more detailed schedule of infrastructure requirements identified by the RCC is attached (Appendix 1).

Understanding the nexus between the end to mining and the feasibility of ferry services is also identified as a priority. This issue will become particularly significant in the lead up to the closure of Enterprise mine in 2019, at which time the number of trucks relying on the ferry service will dramatically reduce. The viability of a regular and affordable ferry service remains critical to future industries on the island and residents alike. Should the viability of the ferry service become a risk, a potential subsidy should be considered by future governments.

A preliminary analysis of the implications of the economic transition for these issues will be undertaken by the Economic Transition Taskforce and its findings will be provided to local, state and commonwealth governments.

4.4 Land

Land is a fixed resource and the way in which it is used can have a profound affect on a local economy. All economic activity is subject to the availability of land and in particular, land which is physically suitable and appropriately designated for the proposed purpose.

Snapshot

The island is approximately 26 000 hectares, most of which is currently designated as State land. The three townships of Dunwich, Amity and Point Lookout have been established on small pockets of freehold land which equate to less than one per cent of the island.

A significant proportion of the State land is dedicated to conservation tenure. National park currently covers 5240 hectares (20 per cent) of the island, with 50 per cent to be national park by the end of 2011, and 80 per cent by end of 2026. The remaining 20 per cent of the island, which is mainly unallocated State land, will be the subject of a Land Use Planning Study which will be used to determine the most appropriate use for each area.

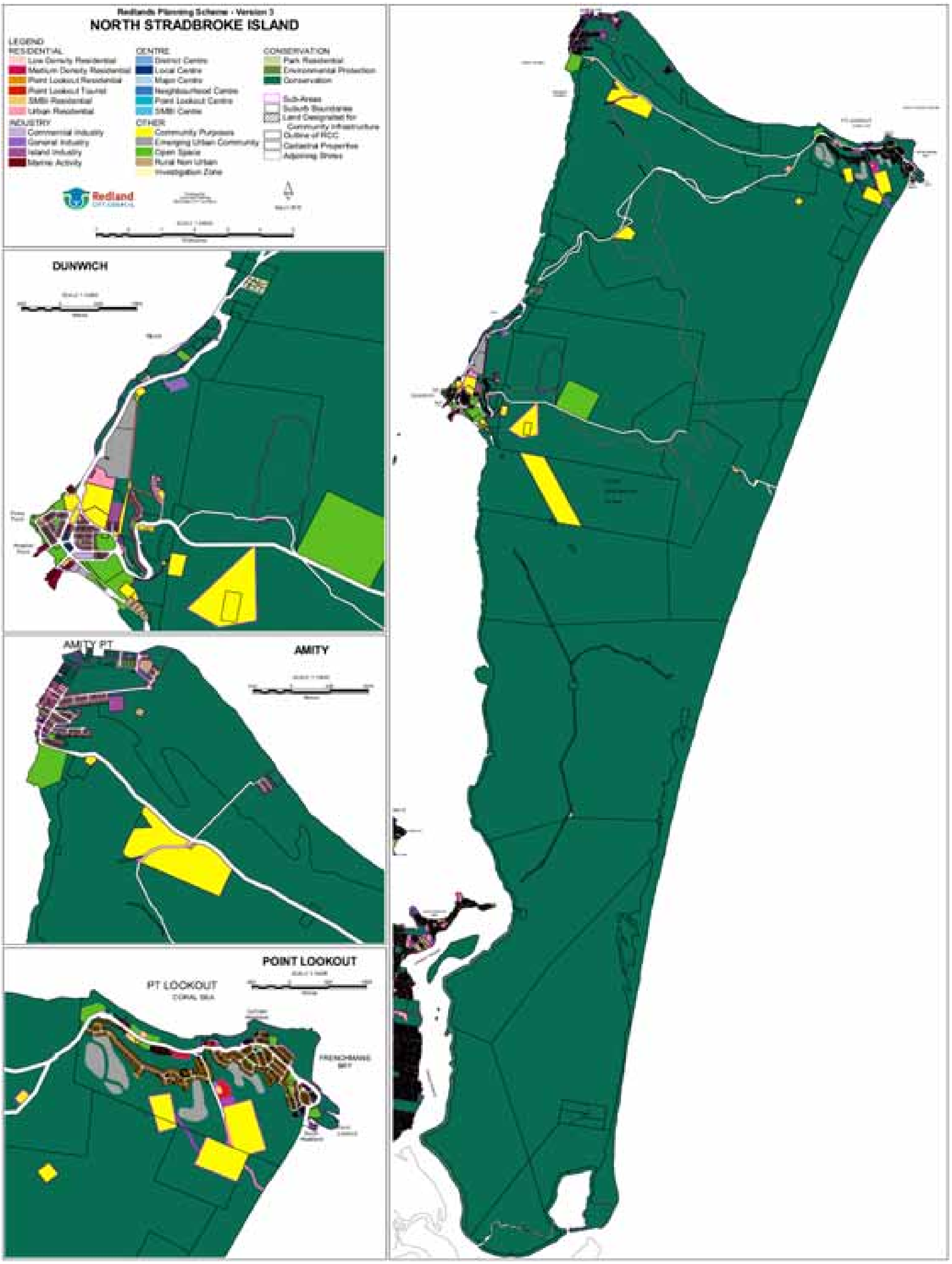
Mining leases have historically covered a significant area of State land (approximately half the island has been subject to mining leases) with the actual location of mining activity moving over time. The active mining leases are currently Enterprise, Yarraman and Vance mines. In addition, four other sites have been previously mined (Amity, Bayside, Gordon and Ibis).

There is a golf course east of Dunwich and an area of pine plantation in the same vicinity. The island has a number of freshwater lakes and wetlands. Redland City Council began extracting freshwater from the southern half of the island in 1990 to supply water to its mainland urban areas.

The Quandamooka People lodged two native title claims under the Commonwealth *Native Title Act 1993* in 1995 and 1999. These included the island and surrounding waters, but excluded all freehold land. On the 4th July 2011, the Federal Court of Australia determined the Quandamooka People as the native title holders, recognising their long and enduring connection with the land and seas of the island and recognising their rights and interests in their traditional country.

Figure 8 shows the townships settlements and other land use planning.

Figure 8. Council land use zoning map



Challenges and opportunities

One of the key considerations in developing a more diverse economic base for the island, and encouraging future investment, is to ensure land is available for development opportunities for sustainable industries.

A land use planning process, primarily focussed on the part of the island that will not be covered by national park, will be undertaken. The planning committee has representatives from DERM, the Department of Local Government and Planning (DLGP), Redland City Council and the Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC). The process will be informed by environmental and cultural considerations as well as economic outcomes and it will ultimately give guidance to whether specific areas of land are suitable for purposes such as residential, commercial, cultural and/or recreational or open space.

There is clearly a close link between economic development opportunities and the land use planning process. While this process will be a fundamental determinant of the nature and scale of sustainable economic development on the island it will, at the same time, be informed by the specific initiatives identified in the draft action plan. The Land Use Planning Study will be mindful of all proposed actions and will endeavour to allow enough appropriately designated land to implement the action plan initiatives.

The first stage of the Land Use Planning Study will be an initial constraints analysis. This will provide an early warning if particular sites are not considered suitable for development. Also, given the longer timeframes for the planning process, the actions included in the draft action plan have been designed so they are not dependent on specific outcomes in the land use planning study.

There may be new development opportunities that become apparent once the land use study has been completed and planning schemes are amended.

While the establishment of the new national park (Naree Budjong Djara National Park) will limit the availability of land for future development it will also provide many opportunities for the economy including new nature-based business opportunities, and increased recreational opportunities. Each year, there are over 16.2 million visits to Queensland parks and forests. The most recent research into the economic value of national parks to the Queensland economy found that direct spending by tourists visiting Queensland national parks is $4.43 billion annually which is 28 per cent of total tourist spending in Queensland.

The Quandamooka People's ILUA with the Queensland Government recognises their rights as traditional owners, custodians and managers of their traditional country, protecting the outstanding environmental and cultural values of the island. Under the ILUA, the Quandamooka People have provided their consent for a number of tenure related actions to allow for future development of the island, to regularise government infrastructure and the road network.

The confidential ILUA will likely have direct implications for future industry opportunities on the island in recognition of the Quandamooka People's native title rights and interests. The ILUA is scheduled to be registered in December 2011. Until this time, the Quandamooka People's specific aspirations and industry plans remain confidential and the Quandamooka People reserve the right to enter into any industry planning on a voluntary basis.

5 Industry and employment profile

In planning for an economic transition, there is a need to understand the current industry and employment profile in order to identify key opportunities and challenges for the future growth of existing business and the emergence of new industry sectors and employment options for the local community. The current industry and employment profile of the island is described in the sections below.

5.1 Employment by industry

Snapshot

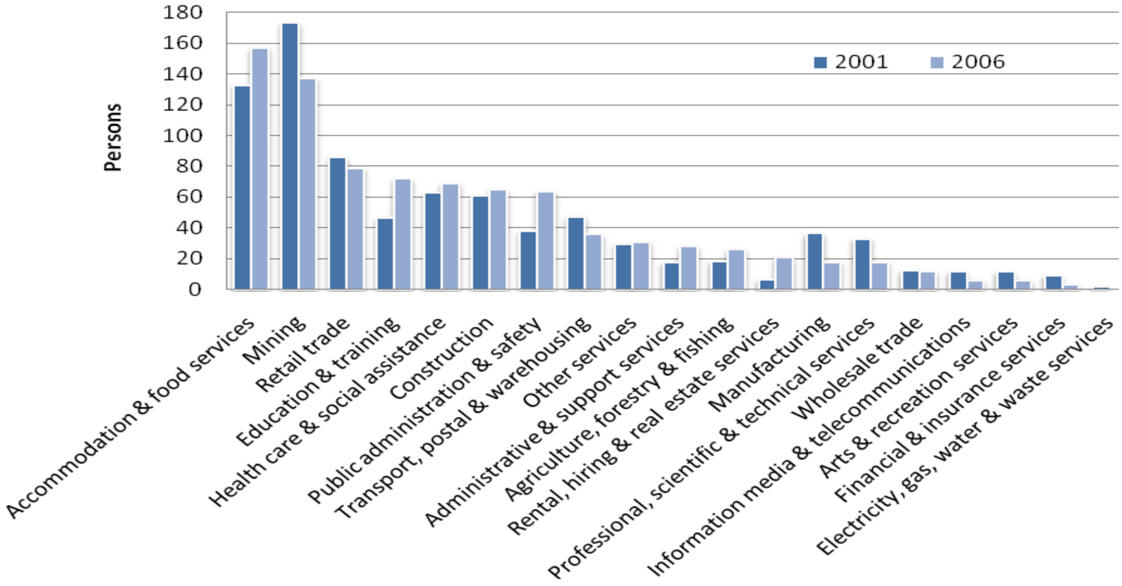
The 2006 ABS employment data highlights the importance of both the mining and tourism industry sectors for employment on the island. With mining providing 14 per cent of all jobs located on the island and accommodation and food services providing 16 per cent, these two sectors represent the largest contribution to the economy in employment terms (Table 5). These industry sectors are significant employers when compared to the Queensland average. Other industry sectors such as agriculture, forestry and fishing; manufacturing; retail trade and arts and recreation services currently make up only small percentages of employment on the island.

Table 5. NSI jobs and employment, 2006

Employment by sector	NSI %	QLD %
Accommodation and food services	16	7
Mining	14	1.7
Construction	10	9
Wholesale trade	10	4
Health and social services	10	10
Education and training	8	8
Other	32	60.3
TOTAL	100 %	100 %

Source: ABS Journey to Work, 2006

Figure 9. Island employment by industry, 2001 and 2006



Source: ABS Census, 2001 and 2006

Figure 9 highlights the changing employment profile between 2001 and 2006 on the island. Of particular significance is the change in balance between the mining and accommodation and food services sectors with the number of jobs in mining decreasing, and the number of jobs in accommodation and food services increasing, over time.

Challenges and opportunities

While not a mono-economy, the industry profile of the island lacks diversity. The island's current economic base is not sufficient to allow for a sustainable future for the island given the phasing out of mining and the clear limits to the contribution of tourism given its seasonality and comparatively lower paid jobs.

Recent events have demonstrated the vulnerability of economies that have a strong reliance on tourism. The combination of the global financial crisis and last summers weather events in Queensland, have placed businesses that rely on tourism under extreme stress—a situation that is by no means limited to the island. While tourism will play an important role in the island’s future, especially within the context of the creation of a new national park, it will not be sufficient to solely support the economy as mining is phased out. The development of a diverse and resilient island economy will require new business initiatives and the growth of new and existing sectors across all three island townships.

With the phase out of mining over the next eight years, employment in the mining sector will continue to decline.

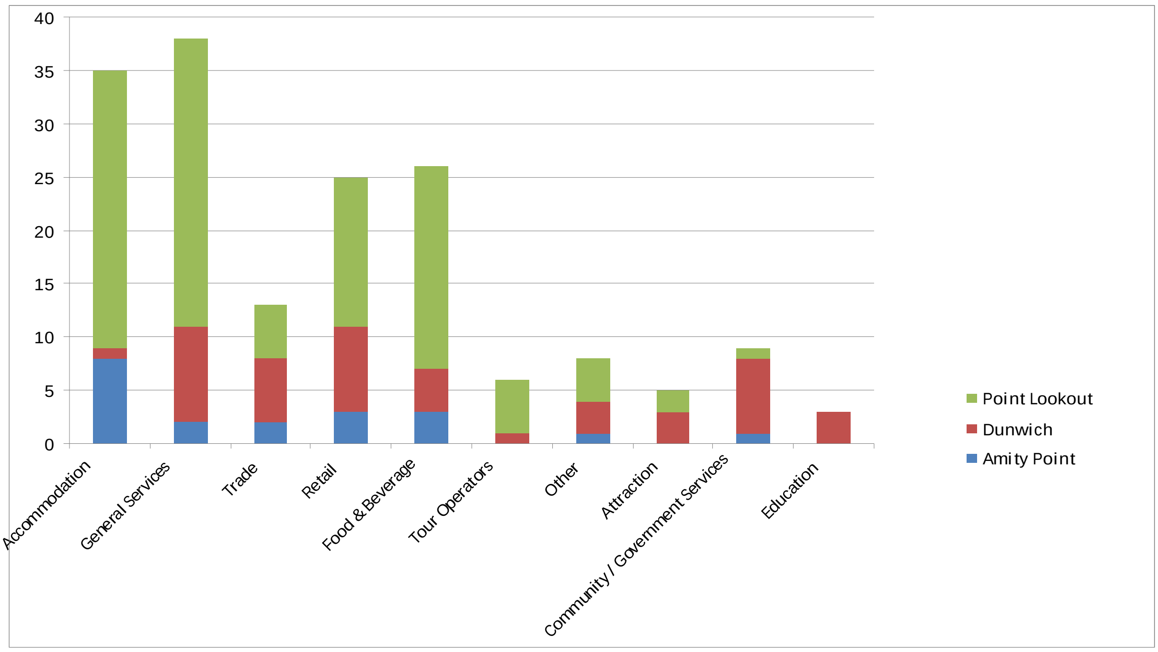
This provides an opportunity for new industry sectors to emerge and grow and for the further development of existing industry sectors that have growth potential.

5.2 Business and industry

Snapshot

A desktop audit of existing businesses on the island in 2011 highlights the importance of the tourism industry with over 50 per cent of the 208 island businesses either directly or indirectly related to the tourism sector—including accommodation, retail, food and beverage, tours and attractions (Figure 10). General services and trade also make up a large proportion of the island businesses, many of which are likely to support the mining sector. The spread by township shows that Point Lookout accounts for just over 50 per cent of all island businesses with the majority of tourism related businesses in Point Lookout and Amity Point, and a concentration of other service-related businesses in Point Lookout and Dunwich.

Figure 10. Audit of island businesses by industry, 2011



Source: EC3 Global Desktop Audit, 2011

5.2.1 Tourism

The island's combination of iconic wildlife, large marine life and traditional and contemporary landscapes and lifestyle, together with easy and affordable access, make it stand alone as a destination. While each factor alone can be found in other regions, it is the combination of all that makes the island a truly special place.

The success of North Stradbroke Island as a tourist destination will depend on the success (or otherwise) of the broader 'Moreton Bay and Islands' located within the Brisbane tourism region. The regional and local context will have a significant impact on the viability of tourism (and other industries) on the island.

A considerable amount of work has already been completed in the region that provides the context for island tourism planning and development. Over the past five years the Queensland Government and the Redland City Council have developed:

- Tourism Strategy for the Redlands (2010–14) (Redland City Council)
- Moreton Bay and Islands Regional Tourism Investment and Infrastructure Plan (Tourism Queensland and Brisbane Marketing)
- Destination Management Plan (Tourism Queensland)
- North Stradbroke Island Tourism Job Transition Stage 1 Scoping (Department of Environment and Resource Management).

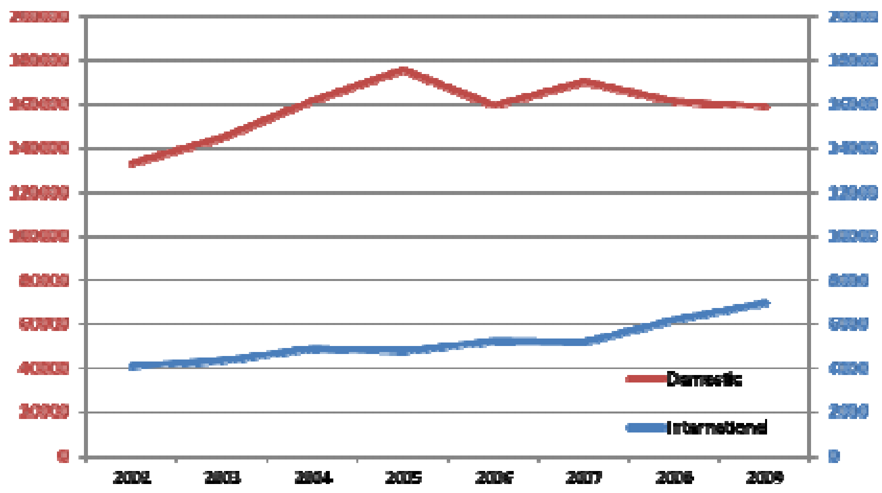
Visitation and economic contribution

The island currently attracts an estimated 350 000 visitors per year, spending 550 000 nights per year (including domestic overnight visitors (75 per cent), day-trippers (22 per cent) and international overnight (35 per cent) making it one of Brisbane's most popular family attractions. Visitors stay an average of 2.2 nights (domestic) and 4.0 nights (international).

Based on research from island tourism operators, 70 per cent of visitors are making a return visit to the island and 30 per cent are first time visitors. This level of repeat visitation is consistent with other popular destinations close to a large city.

Although official visitation data is not available for the island, anecdotal and local data suggests that the island is experiencing similar trends to Redlands, including growth in international visitation and long-term growth in domestic visitation despite a recent short-term decline. Based on anecdotal evidence, domestic visitation to the island from Brisbane is decreasing yet increasing from other regions in Queensland by around eight per cent per year.

Figure 11. 2011 Redlands Visitors 2002–2009



In the year ending March 2010, the Brisbane Region attracted 5.05 million visitors. Of these, it is estimated only three per cent visited the Redlands and North Stradbroke Island.

North Stradbroke Island is better known to Brisbane residents than the Great Barrier Reef and most residents hold positive perceptions of the island. However, visitors are commonly hindered in visiting due to perceived cost, distance and time restrictions.

Interstate visitors make up only a small percentage to the island, highlighting a lack of awareness by interstate markets and an opportunity for broadened marketing efforts (Tourism Strategy for the Redlands 2010–14).

Visitation seasonality has a large influence on tourism business viability and places increased pressure on community infrastructure and services in peak periods. Anecdotal and local data suggests that the island gets peaks of 80–90 per cent occupancy in tourist accommodation during peak season, but drops as low as 10–15 per cent during the off-peak season.

The economic contribution of tourism to the island can be estimated based on national estimates of the economic multiplier of tourism expenditure (see Table 6).

Table 6. Estimated value of tourism to NSI (based on current expenditure)

Type	Visitors	Spend/day	Direct value	Approx jobs (FTEs)
Day trip (22 %)	77 000	$67	$5.2 M	42
Domestic (75 %)	262 500	$76	$20 M	163
International (3 %)	10 500	$95	$1 M	8
TOTAL	350 000		$26.2 M	213

Source: EC3 Global based on Local Estimates and Tourism Satellite Account Model (Qld) for Jobs

Understanding the tourism market

North Stradbroke Island has a reputation for being a relaxing and beautiful weekend getaway. Its unspoilt beaches and flora and fauna add to the island's attractiveness, and as increased numbers of people move into cities and regional areas, quick weekend getaways like North Stradbroke Island have the potential to become deeply ingrained in people's short-break calendars.

According to segmentation undertaken by Tourism Queensland, there are six key target visitor markets in Queensland. These six are Social Fun-seekers, Connectors, Unwinders, Active Explorers, Stylish Travellers and Self-Discoverers. North Stradbroke Island, as part of Brisbane's Moreton Bay and Islands has adopted this approach to identifying the different target markets for the island, including their different needs, wants, motivations and characteristics.

Figure 12. Tourism Queensland market segmentation

The table below highlights the identified market positioning and target markets from the range of recently completed tourism plans and strategies that include North Stradbroke Island.

Table 7. Regional target markets

Strategy	Positioning	Targets
Brisbane Destination Management Plan	‘New world city’ with easy access to coastal, island and natural experiences.	Social Fun-seekers (Interstate) Connectors (Intrastate)
Brisbane Marketing – Locals Campaign	Inspiring and educating residents (hosts) of vast range of products and experiences	Connectors (VFR) Social Fun-seekers (Interstate) Connectors (Intrastate)
Moreton Bay and Islands Campaign	Demonstrating the unique aspects of the area – raw, spirited and refreshing	Social Fun-seekers & Active Explorers (Primary) Connectors (Secondary)
Redlands Tourism Plan 2010	Position Redlands as a short-break destination for SEQ	Connectors - Families (Children 1-15 years) & Couples (without children) Active Explorers - Backpackers

The Economic Transition Strategy has identified the target markets for the island as primarily domestic, including the Connectors and Unwinders, with secondary markets being Active Explorers and Social Fun Seekers. International Experience Seekers are an emerging market along with those outlined below.

Along with their key target markets, the island's tourism operators have also identified a number of emerging markets that could be targeted for tourism growth in the region. These include international travellers seeking Voluntourism and education experiences (including both schools and universities), along with domestic Connectors travelling for events, weddings, and cultural or environmental experiences (also identified in the Tourism Strategy for the Redlands 2010–14). The business market (not a Tourism Queensland market segment), particularly those travelling for small meetings, is another emerging market.

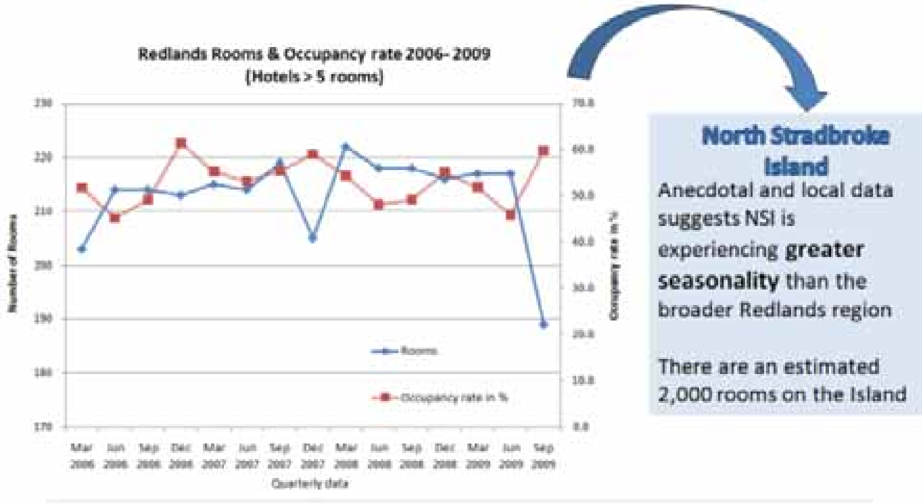
Tourism infrastructure and services

The island is home to over 2000 residents which grows to over 10 000 per week during peak holiday seasons.

The island boasts around 6400 beds in 2000 rooms with a majority of visitors staying in holiday homes (30 per cent) or campgrounds (30 per cent) in and around the major population centres of Point Lookout, Amity and Dunwich.

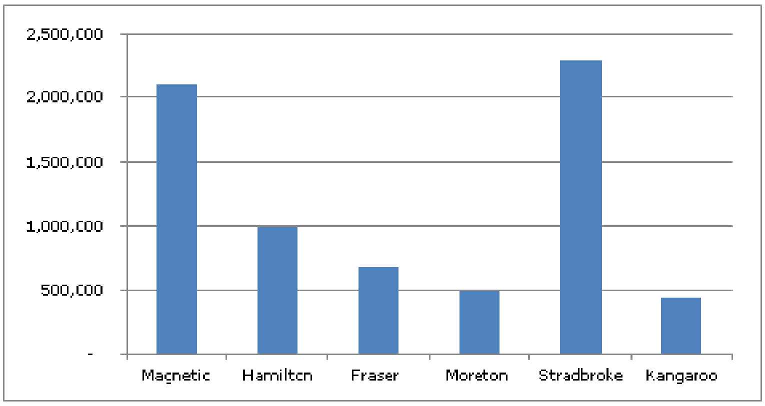
Occupancy rates on the island differ greatly from those on the mainland (Redlands mainland data shown below). Where the mainland averages between 50–60 per cent, the island gets peaks of 80–90 per cent occupancy during peak season but gets as low as 10–15 per cent during the off-peak season.

Figure 13. Redlands rooms and occupancy rate 2006–2009



The provision of appropriate infrastructure and services is essential in supporting tourism growth and development as well as providing for the community’s needs. One of the key strengths of the island is its proximity to the major population centres of South East Queensland. Access to the island is by vehicular ferry or water taxi between Cleveland and Dunwich, which is then connected to a 38 km network of sealed roads on the island. The island is currently well serviced with more seat capacity than other islands in Queensland.

Figure 14. Ferry seat capacity



Future visitor infrastructure in the national park

With the planned expansion of the national park, there will be increasing opportunities to see areas of the island that were previously inaccessible, once appropriate visitor management arrangements are in place.

DERM and the Quandamooka People will be joint managers of the protected areas on the island, and together are planning for the future management of these areas. Further initiatives for the proposed protected areas to be planned cooperatively include:

- investigating the development of day-use areas, both to improve servicing of current visitor nodes and to support the development of new walking and camping opportunities
- planning for interpretation that helps visitors to learn about and respect Quandamooka culture and country, and to enjoy the significant natural values of the island

- planning for a permanent park base—in the interest of realising joint management, there are aspirations for an integrated park base that would bring together the QYAC and DERM as joint managers of the protected areas of the island, as well as providing a place for visitors to get comprehensive information on the island and its parks.

Off-park opportunities for recreation infrastructure across the island will be identified through the land use planning process.

Challenges and opportunities

The island will continue to attract visitors throughout the economic transition from sand mining. The tourism industry offers viable opportunities to contribute to maintaining or growing employment and economic growth on the island. The expansion of the national park will provide increasing opportunities for nature-based tourism and recreation once appropriate visitor management arrangements are in place. In addition, the determination of native title provides the opportunity to recognise the aspirations of the Quandamooka People and potential business ventures within nature-based and cultural tourism.

To increase the contribution made by tourism to the island presents a real opportunity, but rapid growth represents an even greater risk. Through consultation with a range of industry experts the following guiding principles were articulated for appropriate development of tourism on the island:

- The success of any product relies on the awareness of the island and destination.
- Build from the Base: don’t look for external investment solutions.
- Leverage the current assets = beachfront and villages and relaxed environment.
- Be true to the island style and don’t try to be something else.
- Create value, don’t just attract volume.
- Make Straddie special, and help visitors appreciate what they have found.
- Create memorable moments (for all the right reasons).

The vision for the tourism industry on the island is to focus on the sustainable use of the island's natural and cultural resources ensuring the viability of the industry. The tourism actions included in the draft action plan aim to:

- respect culture
- increase spend per day
- broaden the visitor base (not necessarily increase numbers)
- convert those aware of the island to visit
- reduce seasonality
- become a showcase for environmental sustainability.

5.2.2 The contribution of mining to the economy

The following economic analysis was prepared by the Department of Employment, Economic Development and Innovation at the request of the taskforce:

> There are potential local business opportunities which could lead to a positive economic impact in the coming years and may negate the impact of a cessation of sand mining on the Island.
>
> The major analytical research into the overall economic impact of ceasing sand mining activity was conducted by Synergies consultancy for Unimin Pty Ltd[2] in June 2010, which is a sand mining company and is now called Sibelco Australia and New Zealand. The research's objective was to assess the economic and employment impacts of ceasing mining operations in North Stradbroke Island, on the local economy and community.
>
> Synergies economic consulting report titled Impact on North Stradbroke Island from Ceasing Sand Mining (June 2010), examined the impacts on production, incomes, employment and revenues received by governments have been assessed using an input–output (I–O) analysis. Both the direct and indirect effects are included. In the model, strong linkages are claimed between mining and other NSI industries. Mining occurs for heavy metals rutile, zircon, ilemnite and silica from sand. Over the past five years to 2010, minerals revenue has averaged around $125 million.
>
> The input–output table used in the analysis was specifically constructed to represent the North Stradbroke Island economy using small area data[3]. To allow for price effects when production of goods and services either expand or contract a non-linear input–output model developed by the Centre of Policy Modelling at the University of Queensland has been used in this analysis.
>
> In the input–output model, the mineral sands industry has double the average linkage to other industries in terms of being supplied by and supplying to other industries in the North Stradbroke Island economy. In conventional input–output theory, any industry with a linkage index to industries as a whole in an economy which is much greater than one, is said to have an above average economic influence on other industries including itself. The economic significance of the mineral sands industry is further borne out by the forward linkage for output, and the backward and forward linkage indexes for value added, income and employment being close to two[4].
>
> The model estimates sales[5] of mining industry goods and services will fall by $125 million by mining activity ceasing (see Table 8). As a result of this fall the industry will purchase $43.9 million fewer goods and services from other industries[6]. Another result of the fall in mining activity is less income to households from the mining industry. With less income households will consume $57.2 million less in the North Stradbroke economy[7]. When adding these three impacts of the cessation of mining on North Stradbroke Island, Synergies estimates the total impact will be a $226 million loss in production of good and services.
>
> A second impact of the cessation of the mining industry on North Stradbroke Island will be $77.5 million less in the local value[8] of goods and services produced (see Table 8). This fall will mean the mining industry and other industries purchase $17.3 million less in the form of local value added production on the island. It will also mean households with lower incomes purchase $34.9 million less in goods and services in the form of local North Stradbroke Island added value. The addition of these three impacts on the local value added to the island's goods and services in $129.7 million.

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[2] Unimin currently produces up to 600 000 tonnes of sand annually for glass production in Brisbane, for white mortars, and for glass and mineral production in export markets such as New Zealand and Japan.
[3] At the Census collection district
[4] With the exception of the backward output linkage (index = 1.5)
[5] Gross output in Table 11
[6] Giving a Type 1 output multiplier of 1.35
[7] Giving a Type 2A multiplier of 1.81
[8] Value added is different from output because it shows how much of the revenue is due to North Stradbroke Island input (in the form of wages and salaries, profits, dividends and depreciation).

With the cessation of mining activity on the island there will be a $62.8 million decrease in incomes[9] from selling mineral sands. With the mining industry purchasing less from other firms on the island they will experience a $17.3 million fall in their incomes. It will also mean less income for households in North Stradbroke Island who will reduce their consumption by $22.4 million. When adding these three impacts together the total impact of ceasing mining activity will be $97.6 million less factor income.

Employment on North Stradbroke Island will also be affected by the cessation of mining activity on North Stradbroke Island with a fall of 289 jobs being proposed by Synergies. Of these 289 lost jobs, Synergies believes 145 will be in the firms being shut down. In addition to this there will be 53 fewer jobs in industries which supplied goods and services to the closed mining firms. With less household income from these closed mining firms and their consequently lower consumption of goods and services, the North Stradbroke Island firms supplying these goods and services will employ 91 fewer people.

This impact on employment will also be felt in the rest of South East Queensland where the shut down mining firms reduce their staff by 130 people. As a result of this fall in employment the rest of South East Queensland firms they buy goods and services from will reduce their employment by 36 people. The lower consequent ceasing of mining activity on household income and consumption will mean 66 fewer jobs in the rest of South East Queensland. These employment impacts on the rest of South East Queensland mean 232 fewer jobs in the region as a result of stopping sand mining on North Stradbroke Island.

Table 8: Economic and employment impacts of cessation of mining activity

	Direct impact	Flow-on industry Effects	Flow-on Consumption Effects	Total
Gross output ($ M)	125	43.9	57.2	226.1
Value added ($ M)	77.5	17.3	34.9	129.7
Factor income ($ M)	62.8	12.4	22.4	97.6
Employment (Stradbroke) (no.)	145	53	91	289
Employment (South East Queensland) (no.)	130	36	66	232

Source: Synergies Consulting, Impact on North Stradbroke Island from ceasing sand mining, June 2010.

The apparent high falls in indirectly affected industries from the cessation of sand mining activity just described are due to strong linkages between the mining industry and other industries. The strongest linkage is with the manufacturing industry which is estimated to lose 17 per cent of the jobs outside of the mining industry.

[9] Factor incomes are dividends, interest, the retained profits of companies.

Table 9: Distribution of indirect losses from cessation of sand mining by sector—%

	Employment	Value Added
Manufacturing	17	15
Trade	15	13.5
Transport and Communication	15	13.5
Construction	13	14.5
Utilities	11	10
Finance and Business Services	8	7.5
Education and Tourism	5	6
Health and Social Services	4	5
Other	4	3.5
Agriculture	2	1.5
Tourism	2	3
Arts and Recreation Services	2	3.5
Personnel Services	2	3.5
Total	100	100

Source: Synergies Economic Consulting, Impact on North Stradbroke Island from ceasing sand mining

To offset the loss of these jobs, the tourism industry is often touted as a growth industry. The report argued the tourism industry will grow slowly and not create sufficient new jobs to offset mining industry jobs. This argument relies on declining growth rates of visitor trips and nights per person for Australia and Queensland, and factors underlying weakness in tourism, from 1999 to 2009. In addition to the slow growth in tourism job numbers, Synergies argues incomes in the tourism industry tend to be lower than in the mining industry.

Beyond tourism, the report states the impact of the cessation of mining on North Stradbroke Island will be higher water transport costs, reduced transport services, and higher re-fuelling costs; however, it also points out these negative impacts could be offset by reductions in house prices making holiday accommodation cheaper. In addition to this a greater number of tourists could be attracted to North Stradbroke Island by greater environmental amenities from the cessation of mining activity.

Given these large economic impacts suggested in the Synergies report, DEEDI has prepared comments on the methodology. The comments have been limited due to the lack of detail on data and methodology provided in the report.

Such limitations nonetheless do not restrict commentary on the scope, structure and plausibility of the findings from the model used in the Synergies report. A key comment on the plausibility of the findings is that it is questionable whether $125 million in output flowing from sand mining activity has been completely contained within the North Stradbroke Island. With revenue flowing to the head offices of the sand mining companies it is unlikely much of the $125 million of the sales revenue would stay within North Stradbroke Island. This concern over the plausibility of the output impact of the cessation of mining activity on North Stradbroke Island feeds into concerns over the size of the impact on gross value added and incomes. It is also unlikely much of the $77.5 million profit component of value added would stay in North Stradbroke Island. While there are losses to the region, the report also highlights the projected increase in fuel, electricity and transport costs on the island for remaining residents resulting from no mining, along with possible reduced school services, and the regional income decline and social dislocation of miners leaving the area.

Another broad comment is the absence of a discussion of which industries could potentially offset the loss of activity in the mining industry. The report listed the trade, education and personal services industries as having relatively strong demands for goods and services from other industries but did not take the next step in exploring the impact of expanding these industries. The report did highlight the mining industry's higher demand for goods and services from the rest of the North Stradbroke Island's economy compared with the tourism industry; however, did not acknowledge that tourism goods and services demand was still significant enough to support growth in the local economy.

The Synergies report potentially represents a worse case economic impact. This is because no offsetting benefits appear to be modelled and there is no structure change in the North Stradbroke Island accounted for other than the cessation of mining.

These economic losses do appear to be significant in the context of North Stradbroke Island however for the South East Queensland region as a whole they are relatively small. A more thorough assessment of the benefits and costs of closing the sand mining industry would provide better estimates of expected economic losses, as it would include aspects such as values of native biodiversity and natural amenity.

SGS Economics provided a scoping paper into the North Stradbroke Island Economic Development Strategy for the Department of Environment and Resource Management in June 2011. In their review of the Synergies economic consulting report they are confident the economic impacts appear accurate; however, the report states the Synergies report does not adequately consider possible mitigation for some of the economic impacts from the cessation of mining activity, for example, the report lacks analysis of the impacts on households. Such analysis may examine the impact if some households remained on the island and consumed goods and services there too. According to SGS Economics they may choose to stay on a number of factors such as:

- age—long time workers who reside on the island may be able to and chose to retire on the island
- housing commitments—it is understood many mine workers purchased mine housing some years ago and may have mortgages
- lifestyle attractions—this may influence whether workers remain, depending on the value they place on this; however given their considerable connection to the island in terms of time it could be assumed that the lifestyle attractions rate highly; and
- other employment opportunities either on the island or accessible form the island, which is dependant on finding employment with similar skills or retraining.

As a consequence households would continue to consume goods and services and support local industries, reducing the economic cost from cessation of mining activity which Synergies economic consulting reported on.

Conclusion

The review of the report by Synergies Economic Consultancy highlights that the impact analysis is potentially a 'high side' outcome. This is because Synergies acknowledges a range of offsetting factors was not modelled. Furthermore, SGS Economics considered that other mitigating factors were not taken into account. Setting aside these qualifications the method as described by Synergies appears appropriate.

There are several potential industry development opportunities on North Stradbroke Island. Some of these have already been identified in previous studies and analyses.

There are additional industry development opportunities in tourism and education and training for offsetting the impact of the phasing out of mining activity on North Stradbroke Island.

These tourism industry development opportunities were not strong enough to offset the impact of phasing out sand mining activity according to a study by Synergies Economic Consulting. This study found the impact of the phase out of mining would be a large fall in production, employment and incomes in North Stradbroke Island. Synergies acknowledges environmental and social benefits were not factored into their model, regarding the economic loss identified by the model potentially overstating the impact of mineral sand mine closures.

5.3 Future industry development and employment

While the current industry and employment profile of the island is dominated by the mining and tourism sectors, there will be a period of transition over the next eight years. The move away from mining will significantly change the industry and employment profile of the island, with new opportunities for economic growth and development emerging. It is recognised that future industry development on the island will need to be based on a clear assessment of the types and styles of industry that will be both acceptable to the community, viable for private sector investment and can provide an appropriate level of employment and contribution to the island economy. Not all industry sectors will be appropriate for the island and introducing a new industry to the economy is not likely to be sustained in the long term.

See the Economic Transition Strategy and associated Planning for Action documents for further information on future development and employment opportunities.

Note:

This strategy has been prepared by the Department of Environment and Resource Management and the Economic Transition Taskforce with assistance from the following consultants—SGS Economics and Planning, Education Island, EC3 Global and the Quandamooka Land Council.

Appendix 1

Planning for Sustainability of North Stradbroke Island

Draft schedule of infrastructure projects for future consideration by the taskforce

The projects in this infrastructure schedule have been proposed by Redland City Council (RCC) on the basis of research and ongoing consultation as at October 2011 and require further cross-sector consideration. For further information, please see the RCC North Stradbroke Island Economic Transition Taskforce Progress Report, endorsed by Council at the General Meeting on 26 October 2011.

1. Marine transport infrastructure

1.1 Toondah Harbour

Short term	Medium term
Master planning for major redevelopment to address marine-related activities, mixed-use development, commercial, tourism, community recreation, bus transit and ferry terminal, dredging and reclamation	Major commercial redevelopment with private sector involvement
Relocation of recreational boat ramp to Williams St	
Welcome/Interpretative signage	

1.2 Dunwich Harbour

Short term	Medium term
Improved bus pick-up/set down facilities (Junner St)	Ticketing office facility for the shared barge ramp (Junner St)
Safer accommodation of pedestrian movement through car-park (Junner St)	Lounge/waiting facilities with food/refreshment sales (Junner St)
Landscaping, lighting, security and signage improvements (Junner St)	Major redevelopment (Junner St and Cunningham St including Sibelco areas) with private sector involvement
Consolidate land holdings and trustee arrangements (Junner St and Cunningham St including Sibelco areas)	
Master planning for major redevelopment (Junner St and Cunningham St including Sibelco areas) to address marine-related activities, mixed-use development, commercial, tourism, community recreation, bus transit and ferry terminal, dredging and reclamation	
Welcome/Interpretative signage	

2. Tourism infrastructure

2.1 Point Lookout Headland (Terrangee)

Short term	Medium term
Complete Point Lookout Gorge boardwalk and interpretative features	Point Lookout Oval Park Upgrade and Cylinder Beach Park Upgrade
Headland Park Upgrade with trail head amenities building & car park construction	World Class whale watching and interpretation facility including high quality natural museum (with audio/visual interpretation facilities)

Short term	Medium term
Provide access to existing linkages in a Great NSI Recreation Trail (Resolve national park and Nature Conservation Act barriers)	Complete Great NSI Trail and network to fine grain elements including landscape features, stories of place, camping and other facilities

2.2 National parks access

Short term	Medium term
Establish infrastructure development plan to prioritise access and amenity infrastructure (including potential road reconstruction, construction of link between Fishermans and Tazi roads)	Implement infrastructure development plan

2.3 Tourist welcome/information facilities

Short term	Medium term
Establish Dunwich Tourist Welcome and Information Centre	
Establish Point Lookout Information kiosk	

3. Cultural infrastructure

3.1 Minjerribah Knowledge Centre

Short term	Medium term
In partnership with Quandamooka people, government and business investors, create a cultural centre managed by traditional owners for keeping records, images and artefacts, a space for presenting intangible knowledge including traditional songs and dances, and a site for storytelling, exhibitions, a library and research	

3.2 North Stradbroke Island Museum

Short term	Medium term
Assist with the ongoing development of the Museum	

4. Social infrastructure

Short term	Medium term
Point Lookout Hall Precinct – event infrastructure (boardwalk, performance platform, play space, shade)	Improved Island library facilities (possibly in conjunction with other infrastructure)
Land use planning, land identification and land acquisition for social infrastructure	Youth facility/Indoor sports centre
	Community services centre for use by government agencies and NGO’s for the delivery of human services
	Refurbish Amity Point Hall for ETS future
	New Dunwich Cemetery

Short term	Medium term
	Outdoor entertainment arena/amphitheatre for significant events with ancillary infrastructure
	Shark-netting for swimmers at Cylinder Beach

5. Civil infrastructure

Short term	Medium term
Streetscape enhancement for Dunwich, Amity and Point Lookout town centres and main tourist routes	Entrance Statements for Dunwich, Amity and Point Lookout
Expand wastewater reticulation networks	Amity foreshore stabilisation program
Upgrade car-park at Cylinder Beach	Dunwich to Pt Lookout Cycleway
	Amity to Pt Lookout Cycle Track
	Dunwich to Amity Cycle Track