

Socio-Economic Impact

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10. SOCIO-ECONOMIC IMPACT

10.1. Introduction

This Chapter of the EIS addresses the socio-economic aspects related to the proposal. The social impact assessment (SIA) was carried out to assess the potential social impacts and benefits associated with the construction and operation of a bulk export port facility at Port Bonython on the Eyre Peninsula. This Chapter also draws from the economic assessment that was carried out by PricewaterhouseCoopers Australia (PwC) to describe the economic impacts and benefits associated with the proposal (**Appendix D.1**).

To complete the SIA, Arup drew on existing data and reports as well as information gathered from stakeholders and the community through the engagement process. This Chapter discusses the methodology and existing social and economic environment separately, before bringing these together in the socio-economic impact assessment.

10.2. Methodology

The International Principles for Social Impact Assessment (Vanclay, 2003) state that SIA:

“...includes the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, or planned interventions (policies, programs, plans, and Projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment”.

This SIA fulfils the role of analysing the potential social consequences related to the construction and operation of the Port Bonython Bulk Commodities Export Facility (BCEF). Taking this definition into consideration, the objectives for this SIA include:

- » Identifying potential positive and negative social impacts that may come about as a result of the construction and operation of the BCEF
- » Identifying potential measures to enhance positive social impacts and avoid, mitigate or offset potential negative social impacts
- » To provide an assessment of the level of residual social impact (positive or negative) associated with the Project.

10.2.1. Scope of the SIA

Social impacts are associated with changes to one or more of the following (Vanclay, 2003):

- » People’s way of life – how they live, work, play and interact with one another on a day-to-day basis
- » Their culture – that is, their shared beliefs, customs, values and language or dialect
- » Their community – its cohesion, stability, character, services and facilities
- » Their political systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- » Their environment – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources
- » Their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity
- » Their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties
- » Their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

Combining these factors with the requirements of the EIS Guidelines, this SIA focuses on identifying potential impacts associated with people’s way of life, their culture, their environment, their health and wellbeing and their personal and property rights. Aspects of culture and heritage are addressed in greater detail in **Chapter 11, Cultural Heritage**.

10.2.2. Information Sources

The SIA has been informed by a wide range of existing reports and studies. The stakeholder and community engagement and the social assessment are tied together to ensure a participatory approach has been taken to complete the SIA. Input from stakeholders and the community has been used to better understand the current social environment and people's perception of the Project and its potential social impacts and benefits.

The SIA also relies on inputs from a variety of disciplines including landscape and visual, cultural heritage, noise and Project design.

The SIA has been carried out using information gathered from the following sources:

- » **ABS census data** - 2011 Census data has been used where available to provide information about relevant populations
- » **Existing reports and data** – a number of existing reports have been used to gather information about the Project area. This includes government plans and policies, information from other planning projects conducted in the vicinity of the Project area, media reports and community based websites. A list of these sources is included in References
- » **Site visit** – A site visit was conducted on 21 and 22 May 2013 to view the study areas
- » **Discussions with stakeholders** – A series of meetings were held with stakeholders during the site visit to discuss the Project and their perception of potential social impacts. More information about these meetings is included in **Section 10.4.5** of this Chapter.

The social impact study was undertaken in the following stages:

- » **Legislative and policy review** – The legislative framework within which the SIA sits was first explored and documented (refer to **Section 10.3**)
- » **Existing conditions** – Identifying and documenting the existing social environment that may be impacted by the Project. GIS mapping has been used to assist with documenting the existing social environment (Refer to **Section 10.4**)
- » **Impact assessment** – Potential impacts associated with the Project were assessed against the existing conditions to provide an evaluation of the negative and positive social outcomes of each option and their associated sub options (Refer to **Section 10.5**)
- » **Mitigation planning** – Where potential impacts were identified, potential methods to avoid, manage or mitigate these impacts has been identified and document (Refer to **Section 10.5.3.4**).

10.2.3. Study Areas

Four study areas have been defined for the SIA as shown in **Figure 10.2a**. These include:

- » **Primary study area** – which takes in the areas adjacent to the Project's components (within one kilometre of these) – the jetty, the railway and the onshore handling facility
- » **Spencer Gulf** – the marine environment off the coast
- » **Whyalla (Local Government Area (ABS Census code LGA))** – the local government area of Whyalla
- » **The state of South Australia (ABS Census code STE)** – the State of South Australia.

10.2.4. Assumptions and Technical Limitations

The following assumptions and technical limitations have been identified for the SIA. Information available up to and including 1 July 2013 has been used in the preparation of this report.

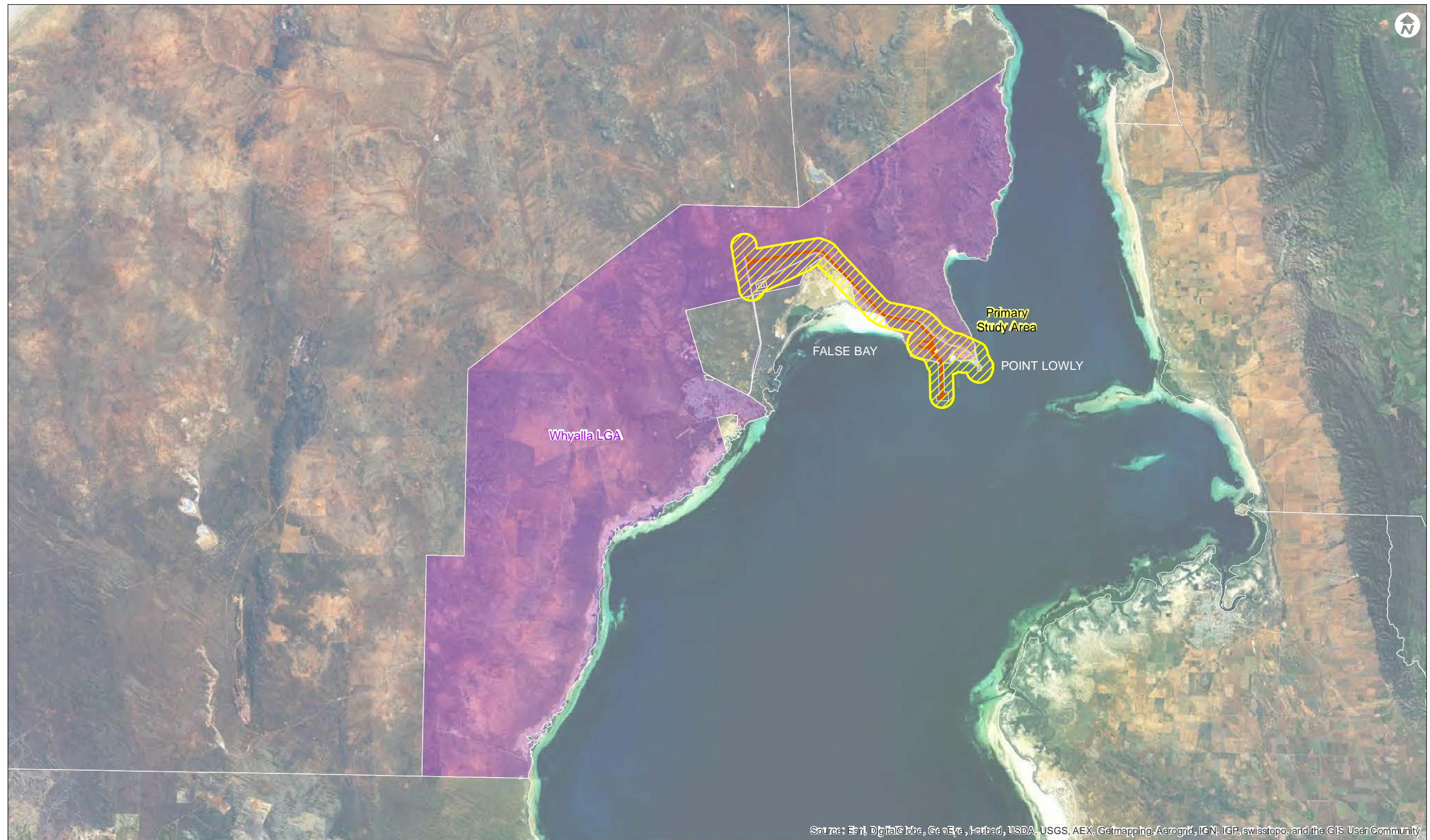
10.2.4.1. Demographic and Statistical Data

The demographic data used for this SIA was drawn from the 2011 ABS Census where available. Demographic profiles in this SIA are based on usual place of residence data which counts where people live no matter where they were on Census night. Place of enumeration data counts where people were on Census night and has been used to represent the 'transient population' within the SIA study areas.

Census data for small sample areas provides limited demographic data; therefore there is little available demographic data for the primary study area.

Major classification changes have occurred between the ABS 2006 and 2011 Census. The 2011 Census collection areas were based upon the Australian Statistical Geography Standard (ASGS) which replaces the Australian Standards Geographic Classification used in the 2006 Census. This means that small discrepancies between comparative data may exist, but these are not deemed to be significant.

Figure 10.2a: Study areas for the socio-economic study



Port Bonython EIS
Spencer Gulf Port Link



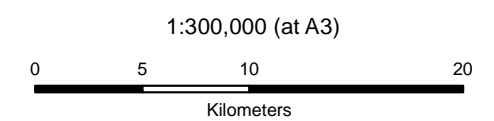
- Legend**
-  Primary study area
 -  Whyalla LGA

Figure 10.2a -
Context and Site Area



Map Projection: Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 53

10.2.5. Impact Assessment

Social assessment is subjective in nature – objectivity has been brought into the assessment where possible through the use of standards, policies and guidelines. The following criteria shown in **Table 10.2a** have been used to assess socio-economic impacts in line with the assessment process detailed in **Chapter 1, Project Introduction**.

Table 10.2a: Impact/risk criteria

Impact Significance/Consequence	Description of Significance
Very High	The social environment is irrevocably changed and people can no longer live, work or recreate in the Whyalla LGA region.
High	The social environment is irrevocably changed and people can no longer live, work or recreate in the vicinity of the primary study area. Highly-significant economic 'loss' to the region's economy in terms of economic output and job creation.
Moderate	The social environment is changed and people no longer see the primary study area (and its surrounding areas) as an attractive place to live, work or recreate. Significant economic 'loss' to the region's economy in terms of economic output and job creation.
Minor	The primary study area is changed, but these changes will only occur during construction or people can/will adapt to these changes over time. Some economic loss in term of economic output and job creation.
Negligible	No change to the social and economic environment.
Beneficial	The social environment is changed and people see the primary study area (and its surrounding areas) as a more attractive place to live, work or recreate. Economic gain will be experienced through an increase in regional/state economic outputs and jobs.

10.2.6. Stakeholder and Community Engagement

Data has been gathered from primary sources (stakeholders and the community) specifically for the SIA. This data has been gathered through discussions with a variety of stakeholders. This information is not a representative sample of the relevant study area populations. This primary data has been used in the SIA to supplement other data sources and highlight emerging trends.

10.3. Policy Context and Legislative Framework

Chapter 2, Legislation and Planning provides a detailed review of the policy and legislative framework for the Project. The following provides an overview of legislation, plans and policies that have specific relevance to the socio-economic environment.

10.3.1. Federal Government Framework

The following sections provide an overview of Federal legislation relevant to the social impact study.

10.3.1.1. Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* seeks to protect the environment, particularly matters of national environmental significance. It streamlines national environmental assessment and approval processes, protects Australian biodiversity and integrates management of important natural and cultural places.

This Project was required to produce a Preliminary Documentation Report to address a number of materials of national environmental significance which have the potential to be impacted. Of relevance to this Chapter is that fact that this Preliminary Documentation Report had to be publicly available for a period of 20 business days for public review and comment.

10.3.1.2. Priority Employment Area Initiative

The Australian Government's Department of Education, Employment and Workplace Relations (DEEWR) established the Priority Employment Area Initiative in 2009 to address unemployment in regional areas. Through the Priority Employment Area initiative, Local Employment Coordinators were appointed to 20 priority employment areas across Australia. They have worked closely with employers, employment services providers, local communities and all levels of government to help drive local solutions to labour market issues. This involves identifying opportunities, issues and helping to coordinate responses from businesses, government and other organisations to put in place strategies to help maximise skills and jobs for people in the regions (Department of Education, Employment and Workplace Relations, 2012a). Local Employment Coordinators are also responsible for the development and implementation of a regional employment plan that sets out their key goals and strategies to address unemployment, skills and labour issues for their priority employment area. One of these 20 areas is the Port Augusta-Whyalla-Port Pirie Priority Employment Area.

10.3.2. South Australian Framework

The following provides an overview of South Australian legislation relevant to the social impact study.

10.3.2.1. Heritage Places Act 1993

The main function of this Act is to provide for the identification, recording and conservation of non-aboriginal places and objects of heritage significance and to establish the South Australia Heritage Council. Under the Heritage Places Act 1993, a person must not, without a permit from the SA Heritage Council, disturb a State Heritage Place or a heritage object. The Point Lowly Lighthouse complex is located within/adjacent to the study area, and is a State Heritage Place. The way in which the Project seeks to minimise impacts on this heritage feature is addressed in further detail in **Chapter 11, Cultural Heritage**.

10.3.2.2. Marine Parks Act 2007

The *Marine Parks Act 2007* provides for a system of marine parks for South Australia. The purpose of this Act is to protect and conserve marine biological diversity and marine habitats by declaring and providing for the management of a comprehensive, adequate and representative system of marine parks and to assist maintenance of the ecological processes, adaptation of the impacts of climate change; conservation of natural and cultural heritage features, and opportunities for public appreciation, education, understanding and enjoyment of marine environments.

The Marine Parks Act is relevant to the social impact assessment as the Upper Spencer Gulf Marine Park has a number of zones which dictate the type of commercial and recreational use of the waters in the vicinity of the Project area.

10.3.2.3. South Australia Strategic Plan

The South Australia Strategic Plan is an overarching policy document influencing the direction of South Australia. It focusses on six integrated objectives including growing prosperity, improving wellbeing, attaining sustainability, fostering creativity, building communities and expanding opportunity. Of particular relevance to the social impact study for the Project are the categories of 'Our prosperity' and 'Building communities'. 'Our prosperity' addresses the need to facilitate economic development and generate employment opportunities. The Project is consistent with the targets outlined in the plan as it aims to generate economic prosperity for the State which in turn will generate employment opportunities.

10.3.2.4. Eyre and Western Region Plan

The *Eyre and Western Region Plan* (DPTI, 2012a) is a volume of the South Australian Planning Strategy. It identifies the planning priorities, principles and policies necessary to achieve community and economic targets outlined by the South Australian Government for this region. It fosters strategic growth and supports activities that benefit the local and regional economy, provide local employment, attract residents and workers, and build vibrant, diverse communities. Principles and policies of the *Eyre and Western Regional Plan* (DPTI, 2012a)

that are of key relevance to the socio-economic component of this EIS are 'Economic development' and 'Population, settlements and culture'.

The principles of the 'economic development' policy are to protect and build on the region's infrastructure, protect and strengthen the economic potential of the region's primary production land, and strengthen the economic potential of the region's mineral and energy resources. As the Project provides an avenue for iron ore to be transported to market, the Project meets the principles of the economic development policy outlined in the plan.

The principles of the 'Population, settlements and culture' are to plan and manage township growth, design towns to be sustainable and provide safe, healthy, accessible, and appealing environments; provide residential land and diverse, affordable and sustainable housing to meet current and future needs; and identify and protect places of heritage and cultural significance, and desired town character. The Project is consistent with the principles of this policy as it considers and mitigates the impacts on the township and environment, and does not impact on residential land, or places of heritage and cultural significance.

10.3.2.5. South Australian Industry Participation Policy

Implemented July 2012, the South Australian Industry Participation Policy (SA IPP) aims to ensure local businesses are given full, fair and reasonable opportunity to tender and participate in significant public and private sector projects (Industry Capability Network, 2013). Supported by the South Australian Government's Department for Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) the policy is implemented and managed by an independent organisation, the Industry Capability Network (ICN). The policy applies to a variety of different projects for the procurement of goods and services including:

- » South Australian Government procurement of goods and services - including infrastructure and construction:
 - with a value of \$5 million and over in metropolitan Adelaide
 - with a value of \$3 million and over in regional SA
- » Public/private partnerships
- » Federally-funded infrastructure and construction projects managed by the South Australian Government
- » Private sector projects receiving - \$2.5 million and over in cash and/or in kind support from the South Australian Government
- » Private sector projects bound by an Indenture Agreement
- » Projects seeking Major Developments status under Section 46 of the *Development Act 1993*.

This policy is relevant to the BCEF as it has been deemed a Major Project under the *Development Act 1993*. As the Project proponent, SGPL is required to identify and report on how the organisation will ensure local suppliers will be provided with reasonable opportunities to compete for work. Given the dollar value of the Project, a detailed Industry Participation Plan is required. It needs to detail how SGPL (and its contractors) will:

- » Provide full, fair, and reasonable opportunities to local Small and Medium Enterprise's (SMEs)
- » Take full responsibility for the contents and accuracy of the SA IPP Plan and the information contained in the Plan
- » Make every effort to comply with the principles of the SA IPP and cooperate with ICN South Australia to perform its role in relation to the policy
- » Implement the SA IPP Plan to the best of their abilities
- » Work with and monitor sub-contracted companies to ensure that they are aware of their responsibilities under the South Australian IPP and our SA IPP Plan
- » Report to ICN South Australia on SME participation achieved during the Project at the end of each quarter and at completion of the contract in line with Point four above.

10.3.3. Local Government Framework

The following sections provide an overview of local government relevant to the social impact study.

10.3.3.1. Whyalla Local Environment Plan

The Local Environment Plan identifies goals, objectives, strategies, and actions for achieving sustainability within the Whyalla region. It does this under the seven Key Management Areas: biodiversity and land management, coastal and marine management, education, energy management, pollution and waste management, transport and water resource management. Of key relevance to the social impact study for this Project is the coastal and marine management. The objectives relating to this component are to:

- » Foster and encourage economic development that is ecologically sustainable
- » Foster and encourage community involvement in coastal and marine management
- » Develop partnerships between government organisations, businesses and community members to assist with the implementation of the management plan
- » Promote throughout the community a greater understanding of coastal and marine management issues that will help encourage responsible use of the coastal and marine environment
- » Conserve and protect the natural ecosystems and landforms of the coastal and marine area, including sites of scientific, historical and cultural importance

- » Evaluate and determine appropriate community uses within the coastal and marine environment, and manage these uses where appropriate
- » Establish the means and resources to carry out the Coastal Management Plan.

The Project provides for economic development in the region through the provision of an avenue for iron ore to be transported to market and the employment opportunities generated from the Project. Ecological impacts of the Project are addressed in **Chapter 14, Marine Ecology**, **Chapter 7, Terrestrial ecology** and **Chapter 12, Climate Change and Greenhouse Gases**. The Project will also seek to retain existing community uses within the coastal and marine environments of the study area.

10.3.3.2. By-Law No7: Caravans and Camping

Under Section 249(4) of the *Local Government Act 1999*, this by-law regulates, controls, and prohibits the use of caravans, vehicles, and tents as places of habitation, and regulates camping on local government land. As outlined by the law, people who wish to camp or erect a tent or similar structure on Council land must seek prior permission from Council, unless a sign states camping in the area is permitted. Likewise, permission must be sought to use caravans as a place of habitation. The by-law also states that the maximum time of camping on a camping reserve in one period is two weeks, and cannot proceed to camp in that area again within a period of four consecutive weeks. The by-law outlines applicable fees and other conditions that must be adhered to when camping or occupying a caravan.

10.3.3.3. By-Law No 8: Boat Harbours and Facilities

This by-law regulates the use of harbours, boat ramps and lands adjacent thereto which are under the care, control and management of the Council or its agents. A person must obtain a ticket prior to using a boat ramp and obtain permission prior to using a boat harbour. The by-law also addresses waste; fishing from a beach; swimming within five metres of a jetty; lighting a fire (unless a barbecue or within a Council allocated area); and the removal of sand rock, vegetation or shells.

10.4. Existing Conditions

This section describes the existing socio-economic environment within the relevant study areas.

10.4.1. Overview of the Primary Study Area

The primary study includes an area 17.5 kilometres in length for a new rail spur and 6.1 kilometre rail loop, an onshore site approximately 800 hectares in size for the transfer, storage and handling of iron ore and an area for a new three kilometre jetty out into Upper Spencer Gulf. Direct impacts from the Project will likely occur where infrastructure is located within this area.

A one kilometre buffer has also been included around proposed infrastructure elements to ensure potential indirect impacts associated with the Project can also be identified and assessed. The primary study area therefore also captures a number of areas that will not be directly impacted by the construction and operation of the proposed infrastructure, but may experience indirect impacts associated with the proposal. Aspects of the primary study area of particular interest to the socio-economic assessment are described in the following sections.

10.4.1.1. Government Controlled Land

As described in **Chapter 2, Project Description** the land required to site the railway and onshore material handling facilities is controlled by the State Government. This land has restricted access and is not currently available for community use, although informal use for recreational purposes occurs. Access to the coast is available through the site via a public unsealed road.

10.4.1.2. Stony Point

As described in **Chapter 11, Cultural Heritage**, Stony Point is an area of Indigenous cultural heritage significance. The area known as Weerona Bay has a number of sites that are of great value to a number of Aboriginal groups, with some of these areas listed on the Department of Premier and Cabinet's Heritage Register. Weerona Bay is no longer publicly accessible and it is fenced off down to the water's edge to restrict access. It was fenced off as part of the development of the Santos facility in the 1980s, as shown in **Figure 10.4a**.

Figure 10.4a: Santos fencing down to the waterline



Stony Point is also a key access point for divers as it is in close proximity to the Giant Australian Cuttlefish (GAC) aggregation area (as described in **Chapter 14, Marine Ecology**). Infrastructure and interpretive signage has been installed by Council in this area to assist with information about, and access to, the GAC aggregation area as shown in **Figure 10.4b**. The Minister for Transport has control of the marine area from the low water mark.

Figure 10.4b: Giant Australian Cuttlefish viewing area and interpretive signage at Stony Point (existing Santos jetty in the background)



Stony Point also marks the start of the unsealed Coast Road, shown in **Figure 10.4c**, which follows the fence line of the Santos facility, before following the line of the coast.

Figure 10.4c: Coast Road



10.4.1.3. Point Lowly Coastal Homes

75 coastal homes are located at Point Lowly (Australian Bureau of Statistics, 2011). Some of these are used as a primary residence with a larger percentage being used as short term accommodation for owners and their visitors. Using rates data, it has been calculated that more than 85 percent of the coastal homes are owned by Whyalla locals who either live at Point Lowly full time or travel the short distance from Whyalla to Point Lowly (Whyalla City Council, 2013b). These coastal homes are shown in **Figure 10.4d**.

Figure 10.4d: Point Lowly coastal homes with the Santos processing facility in the background



10.4.1.4. False Bay Coastal Homes

32 coastal homes are located at False Bay. **Figure 10.4e** shows a photograph of some of these dwellings. Some are used as a primary residence with the rest being used as holiday accommodation for owners.

Figure 10.4e: Coastal homes located at False Bay

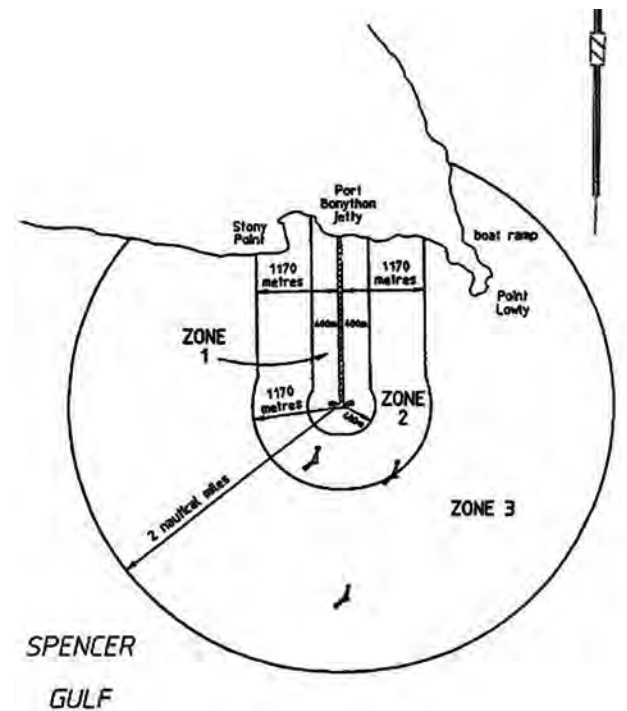


10.4.1.5. Port Bonython Hydrocarbon Processing Plant

Commencing operations in 1984, the facility is operated by Santos. It receives liquid hydrocarbons via a 659 kilometre, 355 millimetre underground pipeline from Moomba. The processing plant distils the liquid into various products including naphtha, crude oil, propane and butane. These are stored in large tanks before being shipped to customers. Approximately 25-30 ships are loaded annually from the 2.4 kilometre jetty and the facility also has infrastructure for loading road tanker trucks (Santos, 2009).

Given the explosive nature of the product, there is an exclusion zone of 400 metres around the existing jetty at all times as shown in **Figure 10.4f** (Zone 1). When a ship is berthed at the jetty and a single red light is flashing every second, vessels are excluded from waters within 1170 metres of the jetty (Zone 2). In an emergency situation two red lights will flash and vessels are not permitted to enter waters within two nautical miles of the jetty.

Figure 10.4f: Santos jetty exclusion zones



10.4.1.6. Point Lowly Camping Areas

Camping is a popular activity at Point Lowly. Facilities provided for campers at Point Lowly include toilets (including disabled toilets), cold outdoor showers, a playground, a surf lifesaving facility and a waste disposal area. The use of Point Lowly by caravans and campers has increased in recent years to a point where Council introduced a Recreational Vehicle Camping Plan in December 2012. As shown in **Figure 10.4g** this plan regulates the use of Point Lowly for camping and includes the following items (Whaylla City Council, 2012b):

- » Introduction of a daily camping fee of five dollars per day
- » Designation of go and no-go areas and increased signage to designate go and no-go areas (as shown in **Figure 10.4g**)
- » Reinforcement of a 14 day camping limit
- » Restrictions on the use of generators to reduce nuisance to residents
- » More specifically define camping areas
- » Closure of some vehicle access routes to direct traffic and protect fragile areas
- » Designates potential future camping areas
- » Increase in policing effort to once per week to check that time limits are being met and fees are being paid
- » Maintaining current amenities at the present level and servicing of sullage points, with monitoring to ensure that they continue to function suitably
- » Maintaining current refuse collection services and monitoring to ensure suitable.

Figure 10.4g: Recreational Vehicle Camping Plan



Boating Facilities

Boating facilities at Point Lowly include a breakwater and an all-weather concrete double boat ramp with a floating walkway between the ramps on the eastern side of the peninsula as shown in **Figure 10.4h** (Whyalla City Council , n.d.). These facilities service both the aquaculture industry, previously located in Fitzgerald Bay and recreational users. The boat ramp is also used as a launch point for some competitors in the annual Australian Snapper Fishing Competition run by Whyalla City Council.

Figure 10.4h: Point Lowly boating facilities



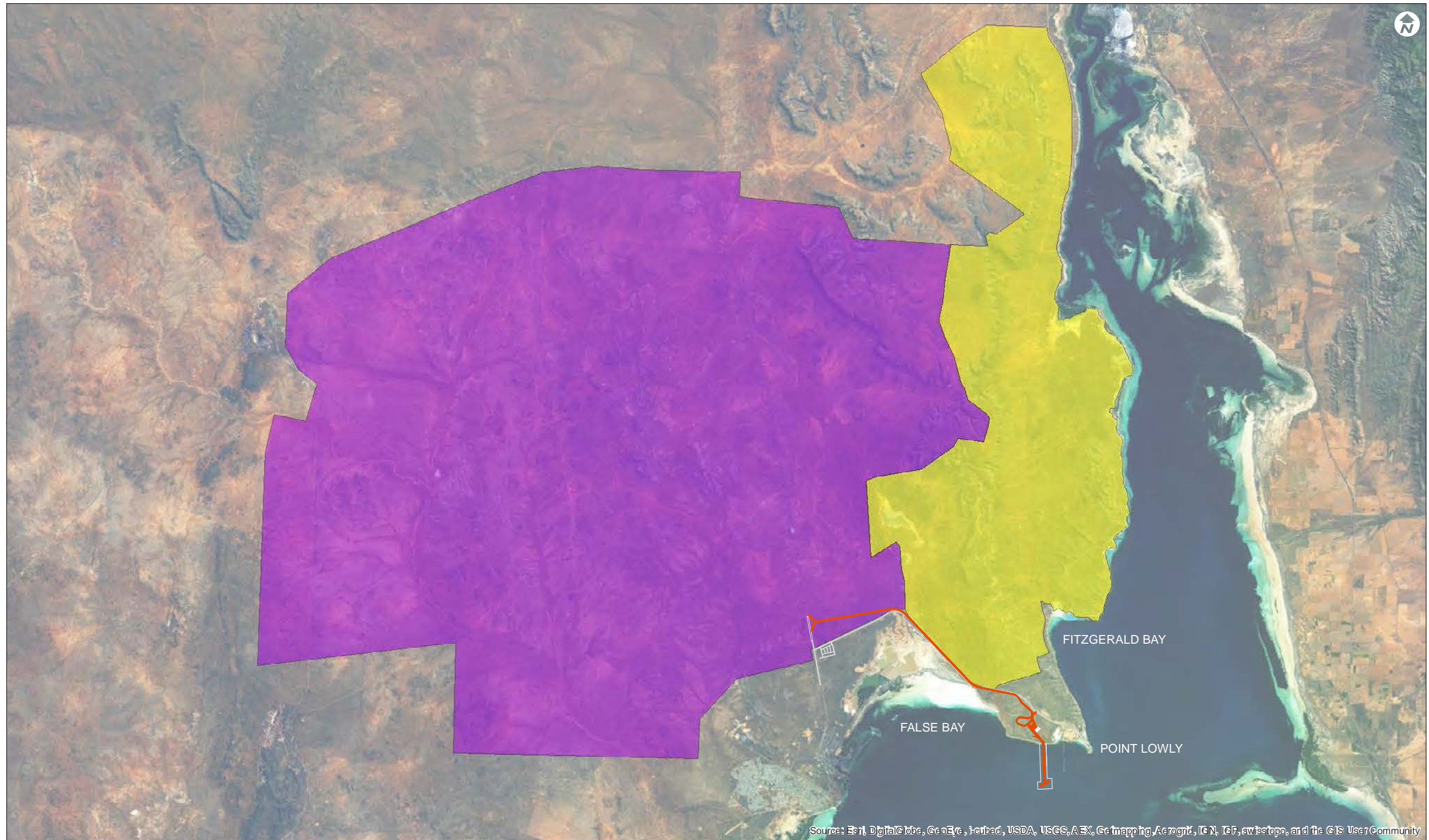
10.4.1.7. Cultana Army Training Area

The Australian Government Department of Defence operates the Cultana Training Area located in close proximity to the primary study area. Cultana Training Area occupies 50,000 hectares, with this land used for training and wheeled and tracked vehicle manoeuvres (BHP Billiton, 2009). Cultana is currently undertaking the Cultana Expansion Project to expand to approximately 209,300 hectares to the west. This expansion is being undertaken by acquiring pastoral leases. It will assist with future air to ground, ground to air and ship to shore training activities. (Australian Government Department of Defence, 2013). Approval for this expansion has not yet been granted. The Cultana army training area and proposed expansion area are shown in **Figure 10.4i**.

The Australian Government's Department of Sustainability, Environmental, Water Population and Communities (SEWPaC) required a Public Environment Report (PER) to be prepared to assess the environmental impacts associated with the expansion. The PER was prepared and put out for public comment in late 2011 and, at the time of writing this Chapter, is being assessed by the Minister (SEWPaC, 2013e).

In June 2012, the South Australian Government agreed to the final versions of the Indigenous Land Use Agreement (ILUA) and the Miscellaneous Lease for Defence Purposes (MLDP), which will govern the use by Defence of the Cultana Expansion Area (Australian Government Department of Defence, 2013).

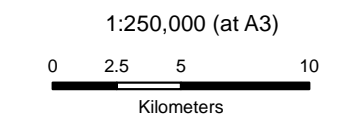
Figure 10.4i: Cultana army training area and proposed expansion area



Port Bonython EIS
Spencer Gulf Port Link

Figure 10.4i -
Cultana Army Training Area
and Proposed Expansion Area

- Legend**
- Cultana training area expansion
 - Current Cultana training area



Map Projection: Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 53

10.4.1.8. Fitzgerald Bay Coastal Homes

While outside the primary study area coastal homes are also located at Fitzgerald Bay. Access to these dwellings is via the unsealed Fitzgerald Bay Road off Port Bonython Road.

10.4.2. Demographic Profile of Primary Study Area

Limited demographic information is available for the primary study area given the remoteness of the area and therefore low number of people living in the area. The smallest unit of measurement used in the 2011 ABS Census is the 'mesh block'. These mesh blocks only provide information about the number of dwellings and permanent residents within each block. Analysis of the series of mesh blocks that fall within the primary study area show that there are approximately 100 dwellings with approximately 50 permanent residents living within the primary study area.

Point Lowly (mesh block 40217820000)

- » 75 dwellings
- » 32 permanent residents.

False Bay (mesh block 4021507000)

- » 32 dwellings
- » 22 residents.

Additional demographic information about this population is not available due to ABS privacy requirements in relation to the small size of the population. Data which provides additional demographic information is considered to cover too larger area to be a reliable source of data for the primary study area.

10.4.2.1. Local Workforce Profile

Given the small number of people who live within the primary study area, ABS data cannot be used to provide employment details for the local population.

The Santos facility and other industrial activities at Port Bonython provide a number of jobs to the region, though it is not known if these jobs are filled by residents from the nearby settlements.

10.4.2.2. Description of the Social Environment

While a number of people call Point Lowly their permanent home, most users are transient with owners using their coastal homes as weekend or holiday accommodation. Other visitors rent the lighthouse cottages or coastal homes, stay in motorhomes or are day visitors to the area. While it does not appear that a formal 'shack owners' representative group is currently operating at Point Lowly, people who own coastal homes appear to know each other, especially those who are permanent Point Lowly residents or reside in nearby Whyalla.

It has been reported by a number of owners that Santos holds an annual BBQ for Point Lowly residents and this is seen as a 'neighbourly' thing to do and it helps maintain their social licence to operate within the community.

The False Bay coastal homes are fewer in number and appear to have a higher percentage of permanent residents than Point Lowly.

10.4.2.3. Social Infrastructure

The primary study area has limited social infrastructure with the settlements predominantly serviced by nearby Whyalla. The infrastructure that is in place at Point Lowly mainly services visitors to the area and is related to camping and boating activities as described in **Sections 10.4.1.6** and **10.1.1.1**.

The Point Lowly lighthouse is a local attraction and as described in **Chapter 11, Cultural Heritage** is a heritage listed location. There the two old light house keeper's houses are run as holiday letting by the Uniting Church. As reported by the Uniting Church's representative, through this activity they aim to provide cost effective accommodation for people in a beautiful setting for those who need some time out. A hall is also located on the property and can be hired for community activities.

10.4.3. Overview of Whyalla

The primary study area is located within the Whyalla Local Government Area (LGA). Whyalla is the closest regional centre to the primary study area, shown in **Figure 10.4j** below. The Whyalla central business district is located approximately 40 kilometres by road from Point Lowly.

Figure 10.4j: Whyalla



10.4.3.1. Demographic Profile of Whyalla

A demographic analysis has been undertaken to provide a profile of the community within the Whyalla LGA. The demographic profile has been compiled using place of residence data from the Australia Bureau of Statistics' (ABS) 2011 Census data.

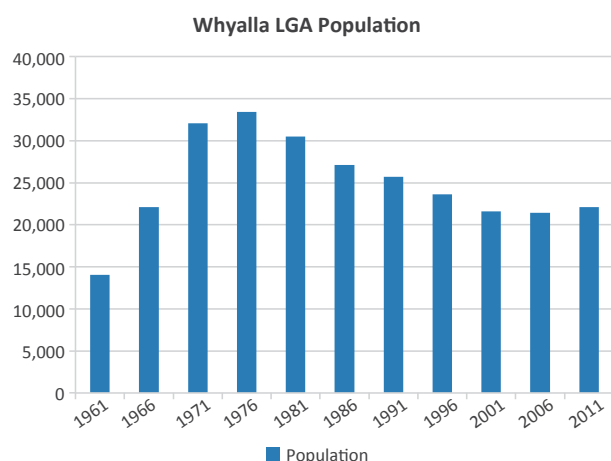
Population

The Whyalla LGA includes a regional town and its surrounds on South Australia's Eyre Peninsula. The LGA currently has a population of around 22,000 people, with this population remaining fairly stable for the past ten years.

Figure 10.4k shows the area's population since 1966. The local government area experienced a significant employment boom during the late 1960s and 1970s in line with the development of the Whyalla steelworks. The LGA's decline in population can also be attributed to changes in employment opportunities at the steelworks, which was the area's primary employer for many years. The area's population has stabilised in the past five to ten years after a significant decline.

Aboriginal and Torres Strait Islander people make up 4.2 percent of the local population, which is above the State and National averages (1.9 percent and 2.5 percent respectively).

Figure 10.4k: Whyalla LGA population 1961 – 2011
(Australian Bureau of Statistics, 2011)



Age and Education

The average age of Whyalla residents is 38 years, a year younger than the South Australian median average and a year older than the Australian average age. Children aged between 0-14 years make up 20.1 percent of the population, a higher percentage than the South Australian population (17.9 percent) while people aged over 65 years make up 14.9 percent of the population, a lower percentage than the South Australian population (16.2 percent). This means 65 percent of the Whyalla population is of working age.

The majority of residents enrolled in education attend primary school or secondary school with 13.6 percent of residents enrolled in tertiary or higher education in the Whyalla local area (compared to 29.6 in South Australia).

Place of Birth and Ancestry

Nearly three quarters of Whyalla residents are Australian born and from Australian decent, with almost 60 percent of residents having both parents born in Australia. This is similar to that of the State and National average. The most common ancestry of Whyalla residents was Australian and English decent followed by Scottish Irish and German.

Language Spoken at Home

English was the most common language spoken at home for almost 90 per cent of residents. Only a small percentage of residents nominated languages other than English spoken at home including Italian, Afrikaans, Greek, Tagalog and German. Less than nine percent of households spoke two or more languages at home, which is below the State and National averages. This indicates a lower level of cultural diversity within the Whyalla area.

Households and Families

The Whyalla household structure is primarily dominated by couples and small families. More than half of occupied private dwellings consisted of three bedrooms and average household size is 2.3 people.

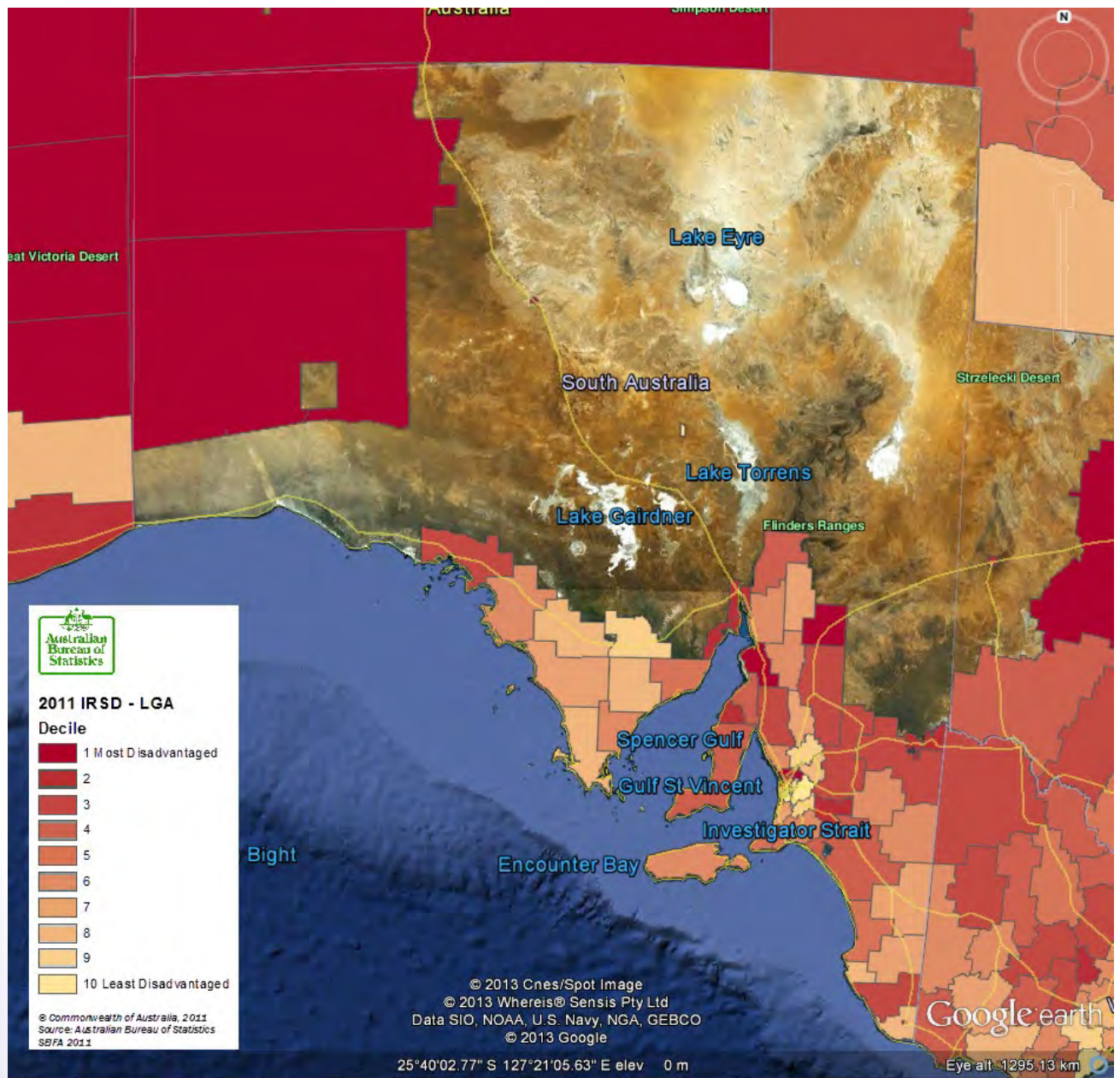
The primary dwelling structure was detached housing at 67.5 percent, below that of the State and National average. Semi-detached, row or terrace houses are common in Whyalla, comprising of almost one third of the housing structure compared to only 10 percent of that of the State. This can be attributed to the area's population boom in the 1960s and 1970s. In response to rapid growth of the steelworks and associated employment opportunities in the region, the South Australian Housing Trust assisted with the industrial expansion of the State by providing cheap rental houses for workers (Marsden, 1988). These dwellings were built as semi-detached housing.

Socio-Economic Indicators

The following factors identify employment, income, housing tender and cost. These attributes are combined with the Census Socio-Economic Indexes for Areas (SEIFA) index. The SEIFA is an index provided by the ABS that summarises different aspects of the socio-economic conditions of people living in an area based on a set of socio-economic data from the Census such as low income, low educational attainment, unemployment and dwellings without motor vehicles. It provides a more general measure of socio-economic status than is given by measuring, for example, income or unemployment alone. SEIFA for the 2011 Census has been used for this report.

Figure 10.4l illustrates the SEIFA index for the Whyalla local government area and surrounding South Australian suburbs. This indicates the SEIFA index for Whyalla is ranked as two indicating that Whyalla is within the bottom 20 percent most disadvantaged LGAs in Australia. People living in this area are more vulnerable to social or economic change.

Figure 10.4I: SEIFA Index for Whyalla and surrounding areas



10.4.3.2. Local Workforce Profile

Employment

In 2011, more than half of Whyalla residents were in full time employment and almost half worked more than 40 hours a week, similar to the State and National averages. In terms of unemployment (based on 2011 Census data), Whyalla was above the State and National average of five percent, with more than eight per cent of Whyalla residents recorded as unemployed. This is likely due to a recent decline in industry in the area and including recent employment cuts by Arrium mining and manufacturing in 2011 and 2012 as reported in the media (Chambers, 2012).

One of the goals listed in the Regional Employment Plan for the Port Augusta-Whyalla-Port Pirie priority employment area is to 'help increase workforce skills and qualifications with direct links to employment for Aboriginal people.'

According to 2011 Census data, the leading employment industry in Whyalla is basic ferrous metal manufacturing with primary occupations being technicians, trade workers and labours. Manufacturing has remained the leading employment industry in the area due to several manufacturing and heavy industries located in the Whyalla area including Arrium, Santos and Ausmelt.

Income

Residents, families and households in the suburb of Whyalla have a lower average weekly income (\$934 per week for households) than the State (\$1,044) and National (\$1,234) average.

Vulnerability

Vulnerable groups are those requiring particular assistance and can be at risk of social exclusion, poverty and discrimination. They may have difficulties in accessing services and employment and educational opportunities, and the support they require. Those that are most likely to be vulnerable include:

- » Persons with lower education levels
- » Single parent households
- » People living alone
- » Older persons
- » People living with a disability, those that require assistance to undertake everyday activities.

Table 10.4a provides details of the statistics of these indicators across the Whyalla local government area and compared to the state. It shows that people living within the Whyalla LGA are more vulnerable to poverty and discrimination than the broader State population. **Table 10.4a** illustrates that Whyalla ranks higher for all vulnerability indicators than the State average with particularly greater numbers of persons living alone, single parent households and unemployment. These statistics correlate with below the State average weekly income for Whyalla households and poses greater risk to increased socio-economic disadvantage.

Table 10.4a: Vulnerability Indicators for Whyalla (LGA) compared to South Australia (ABS Census 2011)

Vulnerability Indicators	Whyalla (LGA)	South Australia
Unemployed	8.1 percent	5.6 percent
Single parent households	20.7 percent	15.9 percent
Persons living alone	32.8 percent	24.3 percent
Children (0-14 years)	20.1 percent	19.3 percent
Older persons (65+ years)	14.9 percent	14.0 percent

Car Ownership

Car ownership in Whyalla is on trend to that of the State and National average with the majority of households owning one or two motor vehicles. Higher car ownership is expected in the area due to its rural location requiring residents to travel greater distances between work, home and community services as well as limited public transport services in the area.

Safety and Crime

Crime rates in Whyalla have reduced according to figures released through the SA Government Office of Crime Statistics and Research **Crime Mapper** website. The site, which includes updated statistics and site-wide crime rates, shows a drop in crime rates for the Whyalla Council area between 2006 and 2010. Offences recorded by SA Police for Whyalla indicated a decrease in the rate of all offences including sexual offences, robbery and extortion and driving offences.

A recent report in Whyalla News (30 Jan 2013) stated that statistics released by the SA police indicate a significant decrease in assaults and property damage, approximately 40 percent decrease in the 12 month period between 2010 and 2011. Police attribute this decline to a change in behaviour of residents from the success of the 1:00am lockout policy which stops patrons from entering licenced premises after this time. This was an agreement between Whyalla's police, hotels and the Liquor Licensing Commission in 2011 for a trial period on 12 months. Its success has seen the policy become permanent in Whyalla (ABC News, 2011).

10.4.3.3. Social Infrastructure

This section identifies facilities, services and resources that are used by and support the community. These include education, health, recreation, commercial and retail, and other facilities and their associated services.

Education

The Whyalla LGA has a number of educational facilities including childcare (seven), kindergarten (two), primary schools (eight), secondary schools (four) and tertiary educational institutions (two).

Health

There are a number of health and medical facilities within the suburb of Whyalla. The majority of these provide local services to the community including hospitals, medical centres, doctors' surgeries, pharmacies, dental practices, orthodontists, chiropractors, physiotherapists, optometrists and other specialist health care providers. These facilities are located in the Whyalla CBD and along Nicolson Avenue within the suburb of Whyalla Norrie.

Whyalla Hospital and Health Services is the most significant health service located in the vicinity of the Project area. Located on Wood Terrace, Whyalla, the Whyalla Hospital and Health Services is part of the Whyalla Eastern Eyre and Far North Health Services and provides a wide range of services utilising local general practitioners, resident specialists, visiting specialists and telemedicine for people in the greater Whyalla area.

Retail and Commercial Services

Retail, commercial services, cafes and restaurants serve Whyalla and surrounding areas. Primary commercial shopping centres and outlets include:

- » City Plaza
- » Westland Shopping Centre
- » Flinders Shopping Centre
- » McDouall Shopping Strip
- » Playford Avenue Shopping strip.

10.4.3.4. Accommodation

There are a number of short term accommodation providers in Whyalla including:

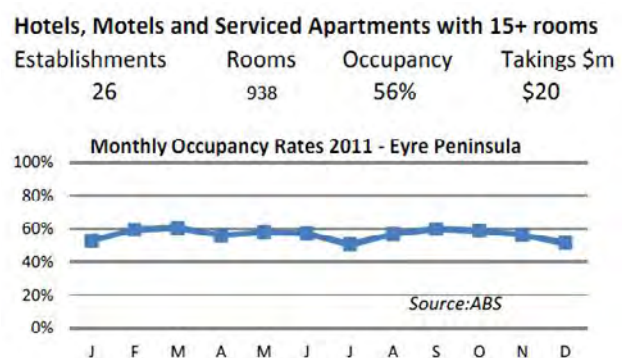
- » Airport Whyalla Motel
- » Quest Whyalla Playford
- » Sundowner Motel Hotel
- » Playford Lodge Holiday Rentals
- » Discovery Holidays Parks- Whyalla Foreshore
- » Whyalla Foreshore Motor Inn
- » The Palm Apartments Whyalla
- » Quest Whyalla
- » Best Western Alexander Motel
- » The New Whyalla Hotel
- » Westland Hotel Motel.

Using room numbers provided on each provider's website, there are more than 350 rooms available in the Whyalla LGA.

Occupancy rates for the Whyalla region are combined in the broader Eyre Peninsula occupancy rates prepared by the South Australian Tourism Commission. The June 2010 – 2012 regional tourism profile for the Eyre Peninsula provides the most accurate data available regarding occupancy rates in the local area. As shown in **Figure 10.4m** occupancy rates for the region sat at 56 percent during 2010 – 2012 (South Australian Tourism Commission, 2012).

In relation to rental accommodation, regional areas of South Australia recorded a vacancy rate of 5.2 percent in the March quarter of 2013 (Real Estate Institute of South Australia, 2013). The Upper Spencer Gulf area (which includes the Whyalla area) recorded a higher vacancy rate of 6.7 percent. According to the Real Estate Institute of South Australia, the median rental rate for a house is \$250 per week and units/apartments is \$190 per week in regional South Australia.

Figure 10.4m: Occupancy rates for hotels, motels and serviced apartments with 15+ rooms



10.4.4. Overview of Upper Spencer Gulf

The Upper Spencer Gulf Marine Park spans the waters of the upper reaches of the Gulf north of the southern end of Cowleds Landing and Jarrold Point. It is one of 19 marine parks contributing to the South Australian Representative System of Marine Protected Areas ((Department of Environment, Water and Natural Resources, 2012b).

The marine area off the coast of Whyalla and Point Lowly is described as the Upper Spencer Gulf. It is contained within the Upper Spencer Gulf Marine Park as shown in **Figure 10.4n**. The Spencer Gulf Marine Park was established to protect the habitat, ecosystem and communities of aquatic organisms (Primary Industries and Regions SA, 2013b).

According to the Upper Spencer Gulf Marine Park Management Plan, the marine park holds the following environmental, economic and social values (2012):

Environmental Values

The Upper Spencer Gulf Marine Park is located within the North Spencer Gulf Bioregion. The Spencer Gulf is described as an inverse estuary with higher salinity present at the top of the Gulf, which is influenced by high temperatures and a large tidal range. The Upper Spencer Gulf is a recognised Wetland of National Importance containing a variety of coastal and marine habitats including saltmarsh, tidal flats and some of the largest stands of mangroves in South Australia. These habitats form important nesting and feeding sites for local and migratory shorebirds. The region is also characterised by sheltered beaches, rocky shoreline, headland reefs, near-shore patch reefs and the most extensive sea grass meadows in South Australia. The most iconic feature is the reefs off Point Lowly which are recognised as an area of major significance for spawning aggregations of the Giant Australian Cuttlefish.

Economic Values

Commercial fisheries operating in the Upper Spencer Gulf Marine Park include the Spencer Gulf Prawn Fishery, the Blue Crab Fishery, the Charter Fishery and the Marine Scalefish Fishery.

The Fitzgerald Bay aquaculture zone policy exists within this marine park. Tourism is an important economic contributor to the region. Key activities include recreational and charter fishing, fishing competitions, sightseeing cruises and diving/snorkelling with Cuttlefish. Significant commercial shipping activity occurs in the region, with associated port operations at Whyalla, Port Bonython and Port Pirie. Ports and shipping activity in the region will continue to support a range of industry sectors, including mining developments.

Existing coastal infrastructure (e.g. power stations) and proposed infrastructure developments (e.g. desalination plants and port facilities) are of economic importance in the region. The water and gas submarine cables traversing Spencer Gulf supply essential services to the Eyre Peninsula community.

The region is part of a broad scale copper-gold geological province within the State and is of economic interest to the resources sector.

Social Values

The Nukunu, Kujani, Kokatha and Barngarla Aboriginal people have traditional associations with areas of the marine park. The Nukunu and Barngarla people have registered native title claims that contain parts of the Upper Spencer Gulf Marine Park.

The Port Augusta wharf, Port Germein jetty and the Point Lowly Lighthouse are listed on the State Heritage Register. Several shipwrecks of heritage significance are located within the park.

Whyalla annually hosts one of the largest amateur fishing tournaments in South Australia, which attracts many people from all over Australia.

10.4.4.1. Marine Park Zoning

Marine parks in South Australia have been zoned for multiple uses, providing for varying levels of conservation, recreational and commercial use (Department of Environment, Water and Natural Resources, 2012b). Zoning provides the basis for the management of marine parks, in accordance with the objects of the Marine Parks Act 2007. This is described in more detail in **Chapter 14, Marine Ecology**. Marine Park zones include:

- » **General Managed Use Zones (GMUZ)** enable areas to be managed to provide protection for habitats and biodiversity, while allowing ecologically sustainable development and use
- » **Habitat Protection Zones (HPZ)** enable areas to be managed to provide protection for habitats and biodiversity, while allowing for activities and uses that do not harm habitats or the functioning of ecosystems
- » **Sanctuary Zones (SZ)** enable areas to be managed to provide protection and conservation for habitats and biodiversity, especially by prohibiting the removal or harm of plants, animals or marine products
- » **Restricted Access Zones (RAZ)** enables areas to be managed by limiting access to them
- » **Special Purpose Areas (SPA)** are areas within marine parks overlaying a zone, or part of a zone, which allow specified activities in that area that will otherwise not be allowed.

Permits are required for commercial and organised activities within the marine park (Department of Environment, Water and Natural Resources, 2012b).

In the vicinity of Whyalla and Point Lowly there are GMUZ, HPZ, SZ and SPAs within the marine park as shown in **Figure 10.4o**.

Figure 10.4n: Upper Spencer Gulf Marine Park (Point Lowly in orange highlight box)

Upper Spencer Gulf Marine Park

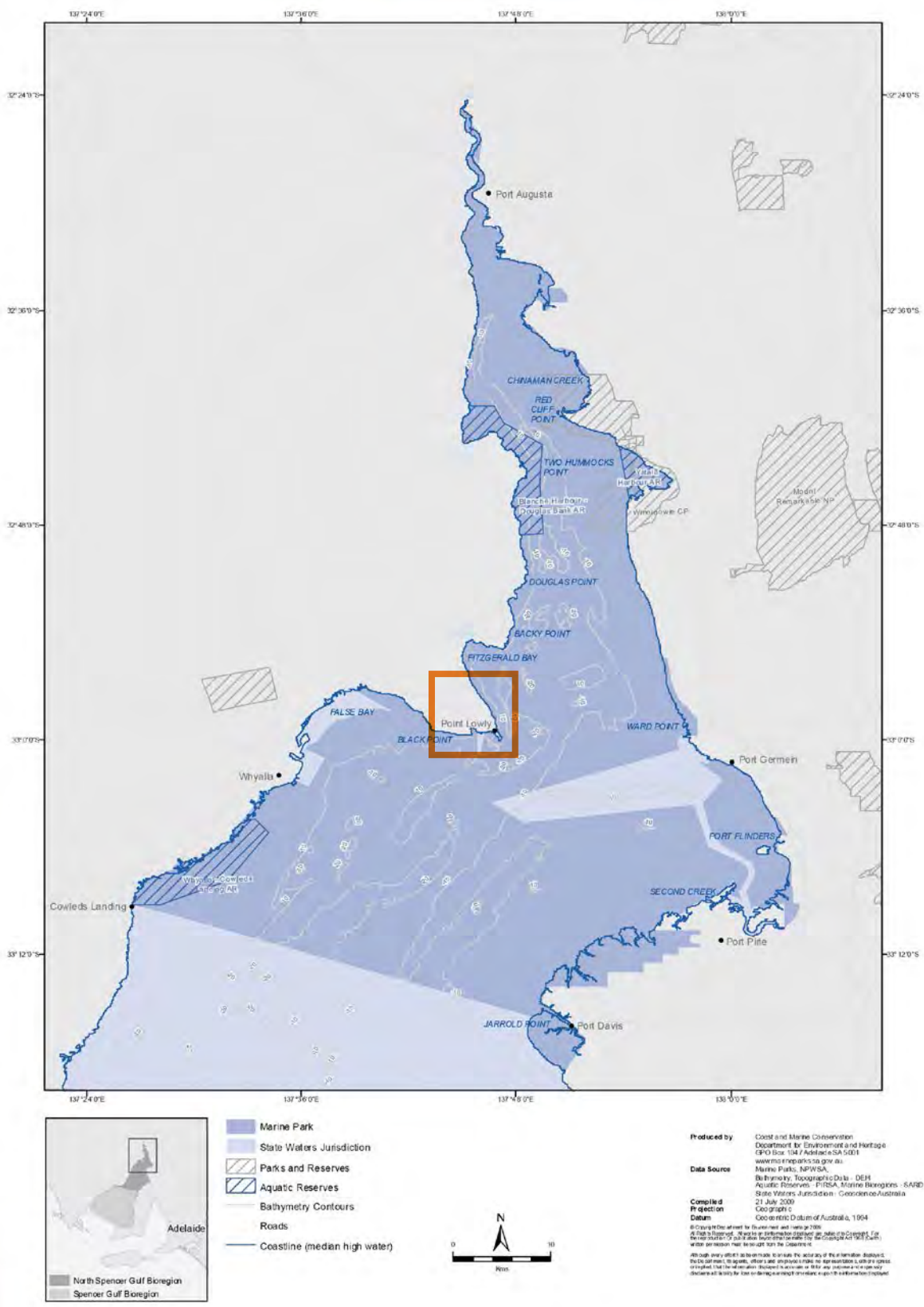
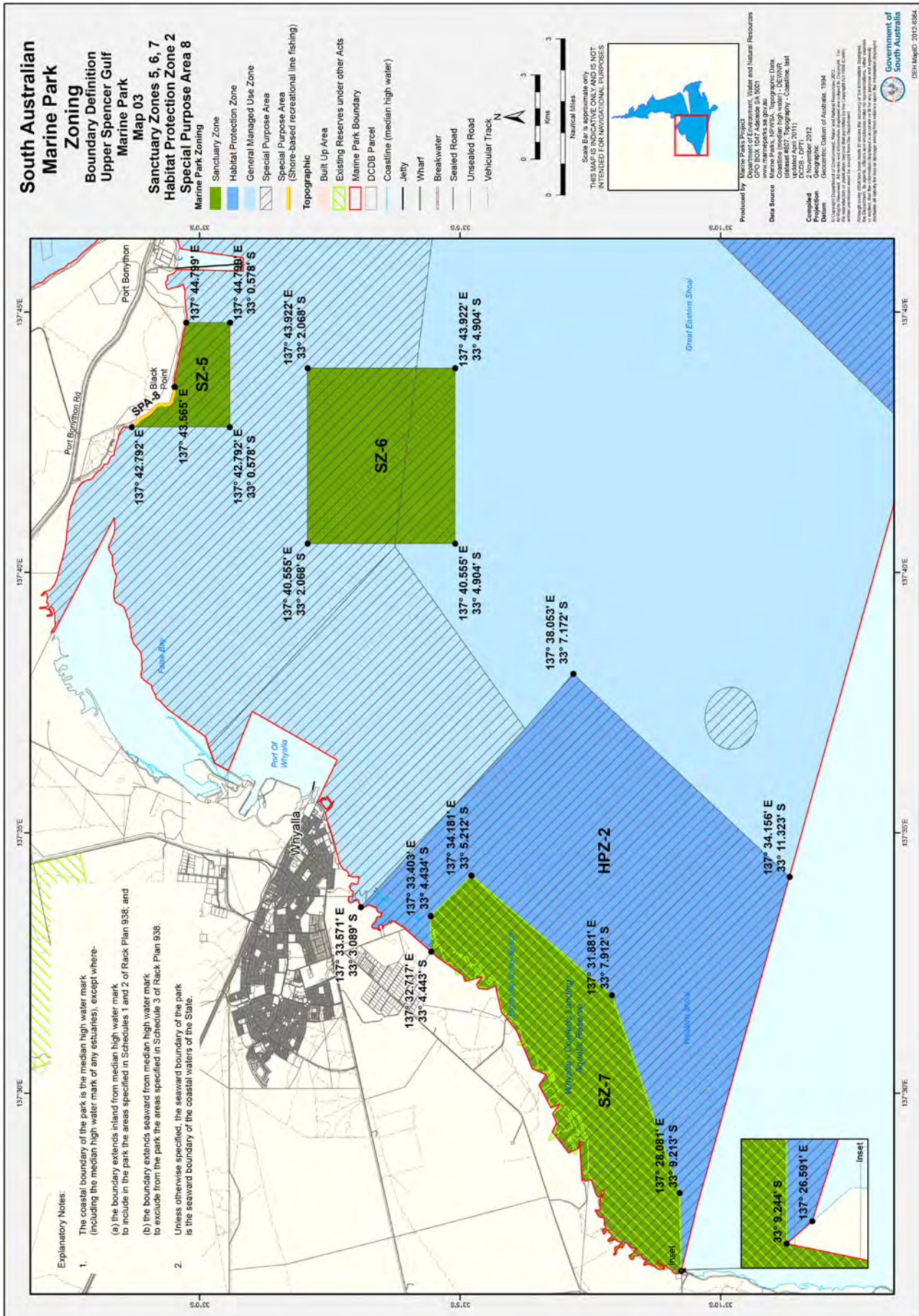


Figure 10.4o: Upper Spencer Gulf Marine Park Map 03 (Sanctuary Zones 5, 6, 7 Habitat Protection Zone 2 Special Purpose Area 8)



10.4.4.2. Giant Australian Cuttlefish

Although not listed as a threatened species under State or Federal legislation, the Giant Australian Cuttlefish (*Sepia apama*) is considered to be an iconic species in the region, particularly in relation to the aggregation phenomenon witnessed annually at Point Lowly. Cuttlefish are solitary animals, but close to spawning time they are known to form localised aggregations with a mass spawning ground located in False Bay near Whyalla. Spawning usually occurs in the winter months and in shallow inshore rocky reefs, in less than 10 metres of water. They start appearing at their spawning ground around the first week of May and disappear towards the end of August (Primary Industries and Regions SA, 2013c). In years gone by, this event attracted divers from around the world to witness the aggregation. In the past few years there has been a significant decline in the number of animals participating in the aggregation.

A small commercial fishery for the GAC existed in South Australia prior to 1998. Historically Cuttlefish constituted a small bait fishery where reported catches rarely exceeded four tonnes per annum, however, in the mid-1990s, commercial fishing pressure increased. In response to this increase, in 1998 the state government introduced a Giant Cuttlefish fishing closure in and around Point Lowly (Primary Industries and Regions SA, 2013c). The closure covers an area where more than 90 percent of the total state-wide catch was historically taken. Since this closure was implemented, the state-wide catch of Cuttlefish has been minimal.

In March 2013, the State Government announced a temporary closure to Cuttlefish fishing in the northern Spencer Gulf, north of a line from Wallaroo to Arno Bay as shown in **Figure 10.4p**. This closure applies only to the taking of Cuttlefish, so if taken inadvertently by persons targeting other cephalopod species (i.e. squid), they must be immediately and carefully returned to the water. This temporary closure applies until 27th March 2014 when it will be reviewed.

The Department of Primary Industries and Regions SA (PRISA) has recently gained approval to amend the Fisheries Management (General) Regulations 2007 to permanently prohibit the take of cephalopods (Squid, Cuttlefish and Octopus) in the waters of False Bay. The permanent closure arrangements will commence in September 2013 (Primary Industries and Regions SA, 2013c).

The GAC aggregation has for a number of years been a tourism draw card for Whyalla with divers from around the State, country and world travelling to dive in waters off Stony Point. Divers come to witness the annual phenomenon each aggregation season. These people will access accommodation and services in Whyalla as well as hiring equipment and booking diving tours through the local dive operator. This activity generates economic benefit for the local community, but the value of this has not been able to be quantified. Whyalla Diving Services is the local dive shop and its owner reported that AGC diving related activity used to account for a small percentage of their overall business (around ten percent), with the rest generated through commercial diving activities, such as underwater audits and repairs of marine based infrastructure (i.e. jetties).

10.4.4.3. Use of Marine Environment for Commercial Activities

The commercial fisheries that operate in the Upper Spencer Gulf Marine Park are:

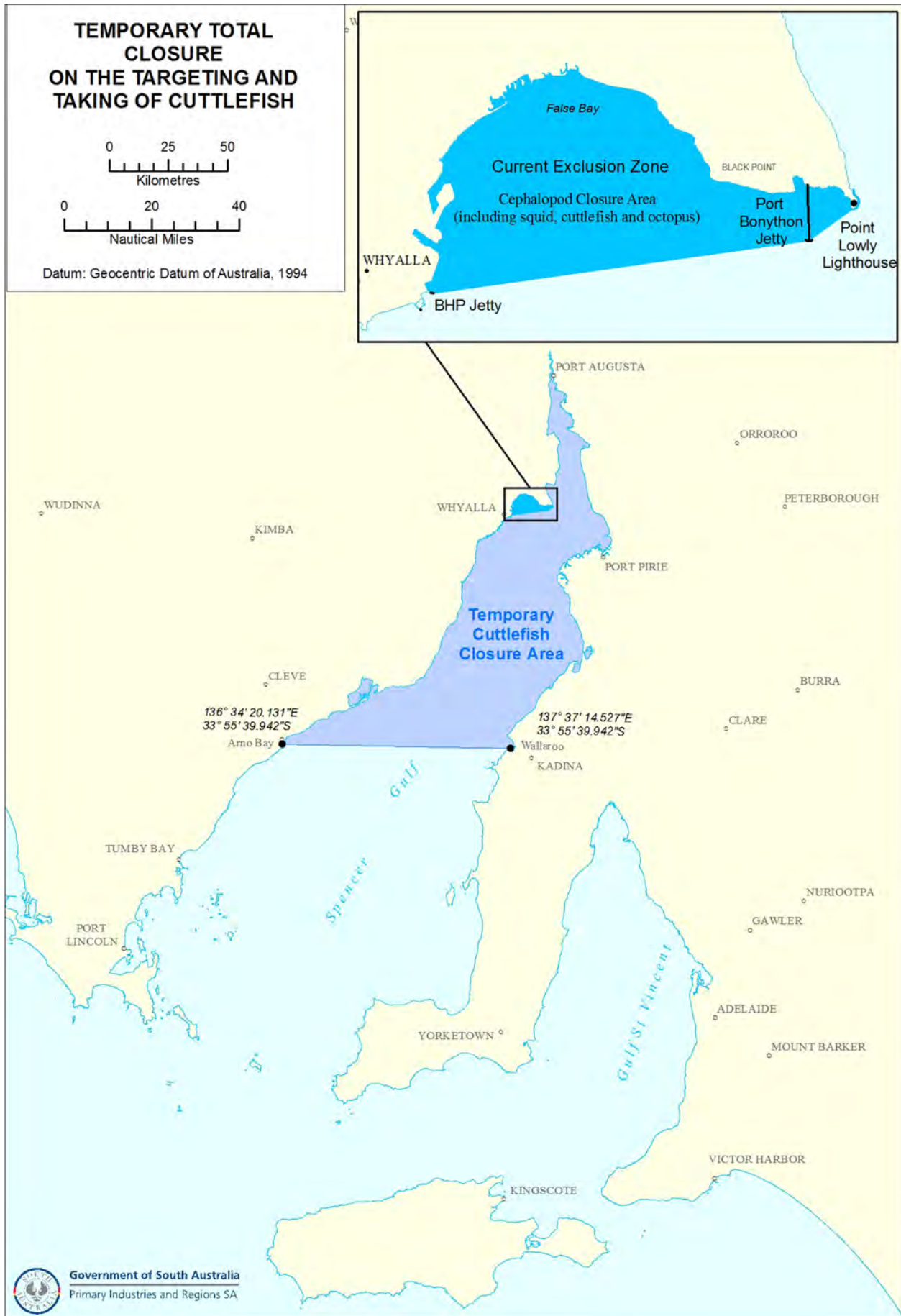
- » Spencer Gulf Prawn Fishery
- » Blue Crab Fishery (Spencer Gulf zone).
- » Marine Scalefish Fishery.

Table 10.4b outlines the economic value of these fisheries in 2008/09 which is the most recent set of economic and jobs data that could be found for all three fisheries.

Table 10.4b: 2008/09 economic value of fisheries operating in the marine park for relevant fishery areas (figures are not specific to the park area and include catches from outside the marine park boundary).

	Catch Value (\$M)	Value of Flow-on to Other Sectors (\$M)	Fishing (FTE) Employment	Flow-On (FTE) Employment
Prawn (Spencer Gulf & West Coast)	30.8	71.2	185	342
Blue Crab (State)	5.1	9.9	28	48
Marine Scalefish (Spencer Gulf/Coffin Bay)	10.9	10.0	249	51

Figure 10.4p: Cuttlefish closure area (PIRSA, 2013)



Spencer Gulf Prawn Fishery

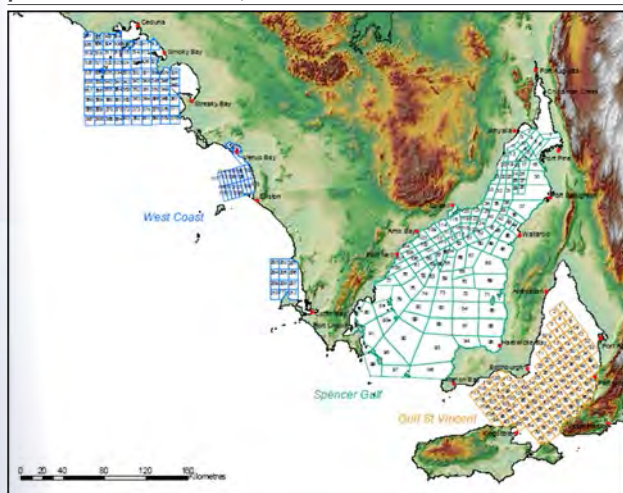
The Upper Spencer Gulf is an important commercial fishery particularly for the Western King Prawn (*Penaeus latisulcatus*). The Western King Prawn spends a considerable part of its life cycle in shallow water, often in estuaries and bays. Adult prawns reach between nine and 25cm in length and are mainly fished in the open waters of the Gulf.

Spawning occurs in the summer months from about November to March, and once the eggs are hatched, the prawns enter shallow water areas (nursery areas) as small post-larvae. They may remain there for nine to 12 months.

Major breeding grounds occur in Eastern Shoal/Lowly Channel which extend to within one to two kilometres of Point Lowly, encompassing northern Teardrop which is east of Eastern Shoal, and the area extending along the eastern coast from Port Davis north to Port Germein. To a lesser extent breeding grounds occur north of Ward Spit on the eastern shore and north of Lowly Point on the western shore. Important nursery areas also occur along the eastern shore from Port Davis to Port Germein, around and north of Ward Spit, and on the western shore around and south of western Shoal (Carrick, 2005).

The Spencer Gulf Prawn Fishery (SGPF - as shown in **Figure 10.4q**) is the largest of three commercial prawn fisheries in South Australia and is the third most valuable prawn fishery in Australia with a value of \$30.3 million in 2011/12. The SGPF is managed by the Department of Primary Industries and Resources of South Australia (PIRSA) under a management plan and harvest strategy. In 2011/12 there were reportedly 39 licences held for the SGPF (SARDI, 2012).

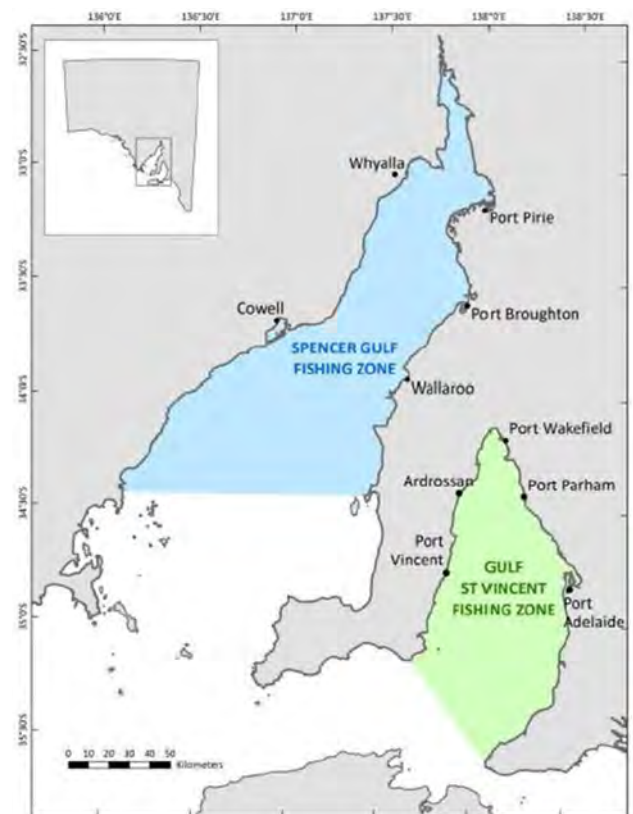
Figure 10.4q: Location of South Australia's three commercial prawn fisheries (SARDI, 2012)



Blue Crab Fishery (Spencer Gulf Zone)

The South Australian Blue Crab Fishery has two defined areas as shown in **Figure 10.4r**: Spencer Gulf and Gulf St Vincent. 638 tonnes of Blue Swimmer Crab was harvested from South Australian Waters in 2011/12, valued at \$4.94 million (note that some of this catch came from outside the Blue Crab Fishery areas). In 2011/12 there were five pot licences in the Spencer Gulf Zone of the Blue Crab fishery.

Figure 10.4r: The location of Spencer Gulf and Gulf St Vincent fishing zones for the Blue Swimmer Crab (SARDI, 2013)



Marine Scalegfish Fishery

There are more than 60 species of marine 'scalefish' taken commercially, however the majority of fishing effort is concentrated on four primary species; King George Whiting (KGW), Southern Garfish, Snapper and Southern Calamari. Together, these four species account for approximately 60 percent of the total fishery production (by weight) and 70 percent of the total fishery value. Most of the catches of these primary species come from the two gulfs.

The total catch of marine scalefish species in 2010/11 was 3,045 tonnes, down eight percent from the previous year. The gross value of production of the Marine Scalegfish Fishery in 2010/11 was almost \$22.9 million.

Aquaculture

Fitzgerald Bay is home to a number of aquaculture zones and lease areas as shown in **Figure 10.4t**. There is an eastern finfish (Yellowtail Kingfish) zone of 1,445ha, a western finfish (Yellowtail Kingfish) zone of 1,704ha and a shellfish zone. These are separated by a 1km buffer. There are also two exclusion zones extending 1km from the coast, one at Point Lowly and one at Backy Point.

Aquaculture in Fitzgerald Bay is currently reduced as a result of disease; with production down from approximately 1227 tonnes in 2007/2008 to about 249 tonnes in 2010/2011 (refer to **Chapter 14, Marine Ecology** for details).

10.4.4.4. Use of Marine Environment for Recreational Activities

While the number of recreational users of the Upper Spencer Gulf has not been able to be quantified, anecdotal evidence (including discussions with local residents) suggest that fishing and boating are popular activities around Whyalla and Point Lowly.

Recreational fishing 'hotspots' in the vicinity of the Project as reported by fishSA.com (2013) are shown in **Figure 10.4u**.

Whyalla City Council's annual Australian Snapper Competition attracted around 500 competitors in 2013. Held each year over the Easter long weekend, the 57-hour competition attracts recreational anglers from the local area with almost half entrants from metropolitan Adelaide, regional South Australia, Victoria, New South Wales, Western Australia and the Northern Territory (Whyalla City Council, 2013a). While the economic contribution of the competition to the local area has not been able to be quantified, competitors spend money in the local area during the competition on accommodation, food and beverages, tackle and equipment, and fuel.

10.4.5. Stakeholder Engagement

Stakeholder and Community Engagement is an important aspect of the EIS process. The EIS Guidelines require Spencer Gulf Port Link to provide a forum for public consultation and informed comment on the proposal and document and describe the consultation strategy adopted to assist with the preparation of the EIS.

The stakeholder engagement and social impact assessment have been undertaken as a combined activity with engagement with people and groups informing the social impact assessment.

Engagement objectives for this Project include:

- » To provide information about the EIS to relevant stakeholders and community members during the preparation of the EIS
- » To provide opportunities for interested people and groups to learn about the EIS as it progresses so they can make informed comments during the public comment period

- » To provide opportunities for SGPL to engage with people and groups to better understand the real and perceived impacts and benefits of the Project
- » To address the consultation requirement of the EIS Guidelines.

Table 10.4c provides an overview of the engagement program's approach and timing.

Figure 10.4t: Fitzgerald Bay aquaculture zones (PIRSA, 2013a)

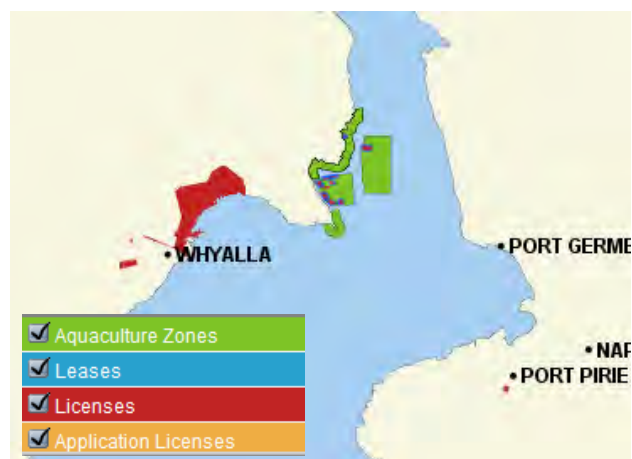


Figure 10.4u: Recreational fishing hot spots as reported by fishSA.com

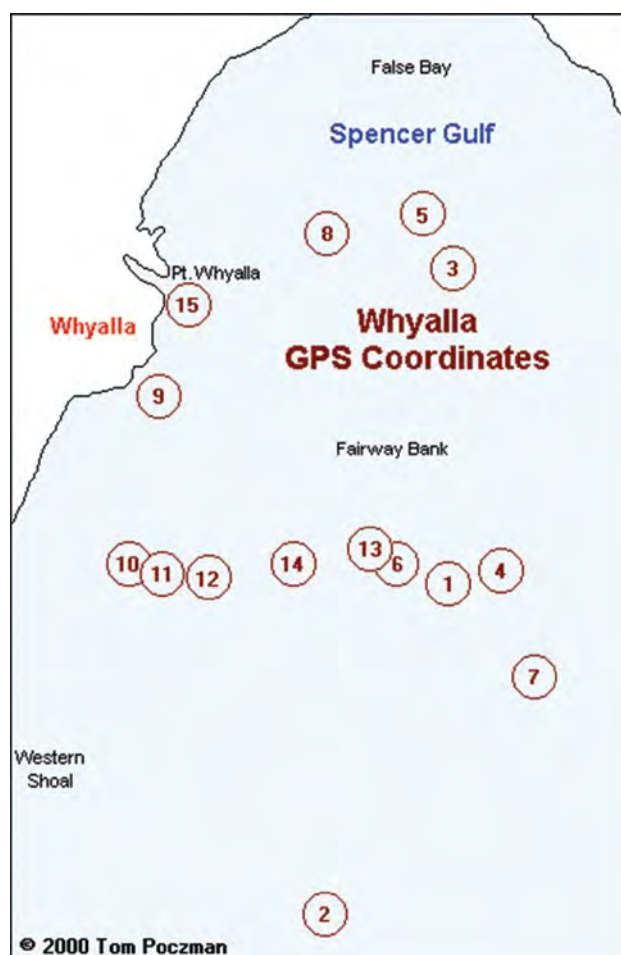


Table 10.4c: Engagement program

Phase	Timing	Rationale	Status
Phase One - Project introduction	June 2013	<ul style="list-style-type: none"> » Provides introductory information about the Project. » Outlines proposed Project timing and how people will be encouraged to participate in the process. » Allows the EIS team to go out and discuss the Project during baseline assessments (especially relevant for social and noise). 	Complete
Phase Two – EPBC Preliminary documentation public comment period	July 2013	<ul style="list-style-type: none"> » Advise and invite comment on the EPBC preliminary documentation. » Provide update to stakeholders. 	Complete
Phase Three - EIS update	August 2013	<ul style="list-style-type: none"> » Provide an update on the progress of the EIS. » Prepare stakeholders for the pending release of the EIS. 	Complete
Phase Four – EIS public comment period	September/ October 2013	<ul style="list-style-type: none"> » Provide the draft EIS for public comment. 	Planned

10.4.5.1. Engagement Methods

Table 10.4d provides an overview of the engagement tools and activities that have been used to engage with the community during the preparation of the EIS.

Table 10.4d: Engagement tools and activities

Tool/activity	Description
Project 1800 number/ email address	<p>A Project phone number and email address was established to allow stakeholders and the community to contact the EIS team:</p> <ul style="list-style-type: none"> » 1800 657 248 » eis@spencergulfportlink.com.au
Stakeholder letters/emails	Addressed letters were sent to identified stakeholders at the start of each engagement phase. These provided an update on EIS progress and will provide details of any engagement activities being undertaken during each engagement phase.
Project website	A Project website was established to provide information about the EIS process. It contains information about the current phase of work, findings to date, resources such as fact sheets and ways to contact the EIS Project team. This website was updated at key milestones during the EIS process.
Stakeholder briefings/ meetings	Face-to-face briefings/meetings were held with key stakeholders during each engagement phase. These briefings were attended by a representative from Spencer Gulf Port Link and Arup.
Media	Media releases were prepared for relevant engagement phase to provide information about the Project to the broader community.
Advertising	Advertising was placed in The Advertiser and Whyalla News to advise the community of the release of the Preliminary Documentation report for public notification. Advertising will again be used to notify stakeholders about the release of the draft EIS for public notification.
Project fact sheets	A series of fact sheets were developed through the EIS process to provide information about relevant topics. These were uploaded to the Project website, emailed/posted to stakeholders with letters and made available to briefings and other face-to-face engagement activities.
EPBC Act Report	The Preliminary Documentation report was made available via the Spencer Gulf Port Link website for public review and comment from 1 July to 29 July 2013.
Draft EIS	The Draft EIS is available for public comment. It has been made available online and in hard copy at relevant community locations.
Public meeting / Public forum/ community information session	A public forum will be held during the EIS public comment period to give people the opportunity to learn about the content of the EIS and ask questions of the EIS team. This forum will be facilitated by DAC.

10.4.5.2. Engagement Outcomes

The following sections detail the activities that took place during each engagement phase.

Engagement Phase One

Engagement phase one was undertaken in May 2013. This phase of engagement focused on identifying key stakeholders and making contact with these people and groups to discuss the EIS process.

During this engagement phase, communication channels for the EIS were established including the Project phone number (1800 675 248) and email address (eis@spencergulfportlink.com.au) and the Project website was established and populated (www.spencergulfportlink.com.au).

Letters were sent to stakeholders on the Project database to introduce the EIS process to them and provide the Project's contact details.

A number of briefing meetings were set up with Project stakeholders to discuss the EIS. The groups SGPL and its consultants met with in May included:

- » Whyalla City Council Councillors (attended by six Councillors)
- » Alternate Port Working Group
- » Uniting Church
- » Whyalla Dive Services
- » Whyalla 1st (presentation to members)
- » Whyalla Chamber of Commerce (meeting with executive team)
- » Point Lowly shack owners - approximately 30 people attended the session at the Point Lowly lighthouse cottages.

At these briefing meetings that EIS process and timing was discussed and questions to help with the socio-economic impact assessment were asked and answered.

Engagement Phase Two

Engagement phase two was undertaken in July 2013. The objective of this engagement phase was to notify stakeholders of the release of the EPBC Act preliminary documentation report for public comment.

The Project website was updated with a link to the preliminary documentation report. Letters were sent to stakeholders advising them of the release of the preliminary documentation report for public comment. Three Project fact sheets were also included with this letter to provide information about the relevant State and Federal Government assessment processes.

The release of the document for public comment was advertised in the Whyalla News on 2 July 2013 and The Adelaide Advertiser on 1 July 2013 as per SEWPaC's requirements. Hard copies of the document were made available for viewing at the Whyalla Library, Whyalla City Council's Civic Building, Flinders Port Holdings in Port Adelaide and the National Library in Canberra.

Engagement Phase Three

Engagement phase three took place just prior to the release of the EIS for public comment in August 2013. This engagement phase was focused on providing additional information about the EIS process and advising the imminent release of the document for public comment.

Letters were sent to stakeholders on the Project database accompanied by three new EIS fact sheets.

A number of briefing meetings were also set up with Project stakeholders to discuss progress on the EIS. The groups SGPL and its consultants met with in August included:

- » Alternate Port Working Group
- » Point Lowly shack owners - 10 people attended the session at the Point Lowly lighthouse cottages.

Engagement Phase Four

A number of activities will take place to support the public comment period for the draft EIS. Planned activities include:

- » Advertisements in the local (Whyalla News) and State (The Adelaide Advertiser) newspapers to advise the commencement of the public comment period.
- » Letters to stakeholder advising the release of the draft EIS for comment and where they can access soft and hard copies of the document.
- » Meetings with key stakeholders to discuss the EIS findings.
- » Update of the Project website.
- » A public meeting facilitated by DAC.

10.5. Impact Assessment

This section details the potential socio-economic impacts associated with the construction and operation of the BCEF at Port Bonython.

10.5.1. Potential Socio-Economic Impacts at a Local Level (Primary Study Area)

As described in **Section 10.2.1** the social impact assessment is focused on identifying potential impacts associated with people's way of life, their culture, their environment, their health and wellbeing and their personal and property rights. Impacts are described as direct or indirect. The following sections describe how these aspects of the social environment may be impacted within the primary study area.

10.5.1.1. People's Way of Life

As described by Vanclay (2003) potential impact associated with people's way of life may change the way they live, work, play and interact with one another on a day-to-day basis. The Project will be constructed on land that has been set aside by the State Government for industrial development. This land is owned by the State and is not considered to be public open space, though anecdotal evidence suggests that people may use this land for recreational purposes (i.e. bush walking) from time to time. While people's use of this land is not currently permissible, this is not strictly enforced. People will no longer be able to access this land once the onshore handling facility is built. All elements of the Project will be constructed on government owned land and no private properties will be acquired; therefore no property owners will be displaced from the area. The infrastructure will be located away from settled areas; therefore no change to the way that residents currently interact with each other is expected.

Road access into the area will largely be maintained as it currently operates. The railway will cross Port Bonython Road, but this will be achieved via a grade separated crossing to maintain road traffic flows. There is the potential for some property accesses along Port Bonython Road to be impacted by the new railway.

Access to the Coast Road (Cuttlefish Drive) (and the coastline itself) will remain open with the jetty crossing above the road. Access to False Bay from both Stony Point and off Port Bonython Road will not be altered.

While the new jetty will remove some of the area currently available for recreational boating and fishing, its associated exclusion zone will only be 50 metres around the new jetty and berth (and any vessel that may be berthed) as the jetty will not be exporting explosive goods. During construction a private jetty will be built at Stony Point for ferrying equipment and staff to the working areas. There will therefore be no disruption to use of the public jetty at Port Bonython.

Overall, the Project is not expected to significantly impact people's way of life and residents, workers and visitors will be able to continue to use the local area in the same way they currently do.

10.5.1.2. Culture

As described by Vanclay (2003) potential impacts associated with people's culture relate to their shared beliefs, customs, values and language or dialect.

Indigenous and non-Indigenous aspects of cultural heritage are discussed in detail in **Chapter 11, Cultural Heritage**.

10.5.1.3. Environment

As described by Vanclay (2003) potential impact associated with people's environment may include the quality of the air and water people use, the availability and quality of the food they eat, the level of hazard or risk, dust and noise they are exposed to, the adequacy of sanitation, their physical safety, and their access to and control over resources.

The Project will not impact residents' current arrangements in terms of access to water, food or sanitation. As described in **Chapter 6, Air Quality**, construction and operation of the BCEF is expected to have a negligible impact on air quality in the primary study area.

As described in **Chapter 5, Water Resources**, there is a low risk of the Project impacting local surface and ground water through construction or operational activities. Whilst unlikely, it is recognised that there is a risk of contaminants being spilled into local surface water during construction activities and this risk needs to be appropriately managed.

As described in **Chapter 17, Hazard and Risk**, the risk to residents, workers and visitors associated with the construction and operation of the Project is generally low. It is recognised that events such as contaminant spills and road or rail accidents could create hazardous situations for people in the primary study area, but that these events are unlikely.

As described in **Chapter 5, Noise and Vibration**, the impact of noise and vibration from construction activities on local sensitive receivers at False Bay and Point Lowly is expected to be negligible. Sensitive receivers at False Bay may experience some related noise during the construction of the railway when the worksite is in close proximity to the settlement. Operational noise from the railway, onshore facility and conveyor located on the jetty is not expected to have any impact on local sensitive receivers. Local residents will see an increase in the number of ships visiting Port Bonython once the BCEF is constructed. The noise from operating vessels and the loading of vessels at the end of the three kilometre jetty is not expected to adversely impact Point Lowly residents.

As described in **Chapter 9, Landscape and Visual**, the introduction of the new railway, onshore facility and jetty at Stony Point is not expected to significantly impact visual amenity from the Point Lowly area as views to the west are already impacted by the existing Santos facility. The proposed BCEF will be located to the west of, and therefore behind, the existing facility when viewed from Point Lowly. From False Bay the new jetty and onshore facilities will not be visible. The BCEF will not be able to be seen from Fitzgerald Bay.

Views from Stony Point looking out into Spencer Gulf will be significantly changed due to the construction of the new jetty. There are no residences at Stony Point; therefore people experiencing these changed views will be transient visitors to the area. Users of Port Bonython Road will also see the railway, grade separated rail crossing and the onshore facilities as they drive along the road. People on boats in Spencer Gulf will also see the new jetty and onshore facilities as they look back towards the mainland.

Much of the land located at Point Lowly is zoned for industrial development, and the introduction of the BCEF will further add to the industrial 'character' of the area already provided by the Santos facility. People's experience of the local environment will be impacted through the increased industrial nature of the primary study area as they travel to their coastal homes or visitor facilities at Point Lowly.

10.5.1.4. Health and Wellbeing

As described by Vanclay (2003) potential impacts associated with people's health and wellbeing relate to physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity. Many owners of dwellings at Point Lowly, False Bay and Fitzgerald Bay use these as holiday/weekend accommodation. Access to these for the purpose of rest and relaxation is important to their general wellbeing. None of the coastal homes will be directly impacted by the Project as it will be wholly constructed on government owned land which does not currently allow access (though it is acknowledged that some people without permission access this area for recreational purposes). People will still have full access to their coastal homes and there are expected to be limited changes to amenity (noise, air quality, visual amenity etc.) once the Project is constructed.

In relation to mental health, property owners in local settlements feel a sense of ownership for Point Lowly. In most cases their dwellings have been in the family for many years and they have a long history with the area. Some feel stressed and worried about the prospect of losing their 'piece of paradise' and during engagement discussions this has been linked to an impact on their health. The key issues that property owners are concerned about are amenity, access, safety and property values.

The loss of Weerona Bay as a recreation area when the Santos facility was constructed in the early 1980s has been described by a number of long term Whyalla/Point Lowly residents during engagement discussions. Restricting access to this area still causes emotional stress to some residents who remember holidaying and picnicking there as children. A number of residents fear that the introduction of more industry to Port Bonython will further reduce their access to recreational areas in the local area. In recent years there have been a number of major developments touted for Port Bonython which have been cancelled or put on hold.

The local community has been involved in discussions about these projects in previous years and has had to deal with uncertainty and the stress related to these up and down nature of these proposals. As much of the Port Bonython local area is zoned for industrial development this stress and worry is likely to continue as projects are planned, constructed and operated in the local area.

In relation to physical health, health impacts associated with the construction and operation of the Project are not expected. Air quality, noise and vibration impacts are not considered to be significant. During construction there will be some changes to traffic management along Port Bonython Road and other local roads to safely facilitate construction traffic (including wide loads). This is aimed at improving safety for all road users. There is potentially an increased risk of vehicle accidents above current levels during construction and operation of the BCEF, though appropriate risk management measures will be implemented to reduce this risk as much as possible.

Point Lowly has been reported by locals as one of the only recreation areas within 100 kilometres of Whyalla. While the number of people who use Point Lowly and surrounds to recreate has not been able to be quantified, it is expected that recreation in the area improves the health and wellbeing of people who use it. The construction of the BCEF will not remove any public open space used for recreation as the site for onshore facilities currently has restricted access. Access to public beaches and facilities will not be impacted by the Project. Recreational vehicles and campers will still be able to camp in the local area as per Council's management plan.

In relation to recreational diving activities that have occurred at Stony Point for the purpose of viewing the GAC aggregation in previous years, this activity can continue to occur and facilities (interpretive signage and platform) will be relocated to an area adjacent the Marine park boundary (west from current site).

10.5.1.5. Personal and Property Rights

As described by Vanclay (2003) potential impacts associated with people's personal and property rights relate to whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties.

The Project will not have a direct impact on people's property; therefore no landowners will require compensation for the loss of any land. The potential impact of the Project on property values has not been able to be quantified. That said, the land surrounding the coastal homes at Point Lowly has been zoned for industrial development for a number of years and it is assumed that the market price of properties in this area will already take this fact into consideration.

10.5.2. Potential Impacts on a Regional Scale (Whyalla)

At a regional scale, potential socio-economic impacts and benefits are related to jobs, accommodation of construction workforce and the social impacts of construction workers in the town of Whyalla.

The Project is expected to directly create a maximum 270 full time equivalent (FTE) jobs during construction and 40 FTE jobs during operation. In addition to this, the stimulus provided by the capital expenditure, operating expenditure and export revenue associated with the Project could deliver up to 600 jobs (FTE) for the local economies in the Eyre and Northern Statistical Divisions in SA.

The Project's construction workforce is likely to be drawn both from the local area and outside the local area (where specialist skill sets are required).

Leighton Contractors (LCPL), who are part of SGPL, has offices locally in Adelaide and Whyalla, together with a number of other project offices in South Australia. Where ever possible, LCPL recruits locally and imports specialist skills and expertise if it is not available locally. This has been demonstrated on a number of projects in South Australia including the new Royal Adelaide Hospital and the Whyalla operations.

LCPL develops a Procurement Plan for each project that sets out the strategy, roles and responsibilities, activities and schedule required to deliver the required procurement outcomes for the project as agreed and documented at project start (or earlier during the work winning phase) with the project team and key stakeholders. This can include targets for local content and strategies for packaging the works to maximise local content. It can also include an expression of interest (EOI) phase to identify the availability of local content prior to packaging the works.

At this stage it is difficult to commit to a local content target number without knowing what will be available in the market place at the time of the project being implemented. A number of factors such as other competing works, local economic conditions and budget all impact on level of local content. LCPL can commit to implementing strategies through its recruitment and procurement plans to maximise local employment and local content opportunities with the support of available government programs.

In relation to short term accommodation, as described in **Section 10.4.3.4**, the Eyre Peninsula (which includes the Whyalla area) currently has 938 rooms available that could be used to house construction workers. Based on an occupancy rate of around 60 percent, this will mean that on average around 375 rooms are available in the region to house workers if required, though not all of these are located in Whyalla. Applying this occupancy rate to estimated number of rooms available in Whyalla (350) will mean that on average around 140 rooms will be available to use as short term accommodation for workers. Discussions with Whyalla based accommodation providers showed that occupancy during the working week are much lower than on the weekends and they are keen to explore ways to increase their weekend occupancy rates.

While it is not known how many properties are available to rent in Whyalla, the vacancy rate for the Upper Spencer Gulf area is sitting at 6.7 percent, meaning there are properties available to rent in the local area should workers need longer term accommodation.

Where workers are living outside their usual place of residence away from family structures there is the potential for anti-social and unhealthy behaviour to occur. If construction workers are to be housed in the town on a short term basis there is the potential for this behaviour to impact on the local population. As reported in **Section 10.4.3.2** the introduction of a 1:00am lock out in licenced venues has decreased the amount of alcohol fuelled violence and crime in the Whyalla area and this will go some way to curbing anti-social behaviour.

10.5.2.1. Potential Impacts to Marine Based Activities

The introduction of a second jetty at Port Bonython will remove additional area from commercial and recreational access where the jetty is constructed (Refer to **Figure 1.6a**).

Limited commercial fishing occurs in the area where the jetty will be constructed given its proximity to the existing jetty's exclusion zone and the marine park's sanctuary zone, therefore limited impact of commercial fishing in the vicinity of the primary study area is expected. The additional ships accessing Port Bonython will operate within the existing shipping channels. It is illegal to anchor a vessel or impede the shipping channel in any way; therefore smaller vessels should not be maneuvering within the shipping channel, except to cross a channel at its narrowest point (South Australian Government, 2013). Given that smaller recreational and commercial vessels should not be within the shipping channels, additional numbers of ships in the Upper Spencer Gulf is not expected to have a great impact on commercial and recreational vessels.

As described in **Chapter 14, Marine Ecology** the existing Santos jetty provides an artificial reef for marine life, protected by the jetty's exclusion zone. It has been reported that the edge of the exclusion zone is one of the best fishing spots for snapper at the annual Australian Snapper Fishing Competition. The addition of a second jetty will provide more artificial reef for marine life to inhabit. The permanent exclusion zone around the new jetty is much less than the existing jetty, meaning those recreational fishers will be able to come much closer to this structure than they can the existing jetty.

A large percentage of dive services provided by Whyalla Dive Services (approximately 90 percent) are currently associated with commercial diving such as the regular auditing and maintenance of underwater structures and pipelines. The introduction of an additional three kilometre jetty structure that will also require regular auditing and maintenance may improve commercial diving opportunities for local operators.

10.5.3. Potential Economic Benefits

PwC carried out a detailed economic assessment of the BCEF for SGPL. The complete economic assessment is included in the EIS as **Appendix D.1**. A summary of the economic findings is included in this section.

Construction and operation of the BCEF is expected to generate the following direct expenditure and revenue:

- » Additional capital expenditure of \$913 million (\$2012, real, undiscounted), with a present value of \$616 million
- » Additional Port Bonython operating expenditure over 30 years of \$16,633 million (undiscounted) or \$5,683 million (discounted)
- » Avoided logistics costs relative to the base case (as a result of reduced transport distances and/or more efficient mine to port transport modes) of \$18,843 million (undiscounted) or \$3,951 (discounted)
- » Additional revenue from iron ore exports that will not be realised with the capacity constrained base case of \$14,565 million (undiscounted) or \$9,154 million (present value)
- » Additional Government revenue from taxes (Carbon Tax, SA royalties, Mineral Resource Rent Tax and company tax) associated with revenue from iron ore exports that will not be realised with the capacity constrained base case of \$4,500 million (undiscounted) or \$2,841 million (present value).

10.5.3.1. Impacts on the Australian Economy

Australian Gross Domestic Product (GDP) for the most recent financial year for which data is available from the ABS (2011/12) is estimated to be \$370 billion, while the Project is estimated to result in an additional \$9.0 billion in GDP over 30 years of operation, or around \$300 million per year. The estimate of additional GDP with the Project is therefore equivalent to around 2.4 percent in total (i.e. over 30 years) or around 0.1 percent each year.

10.5.3.2. Impacts on the South Australian Economy

The South Australian Gross State Product (GSP) for the most recent financial year for which data is available from the ABS (2011/12) is estimated to be \$91.2 billion, while the Project is estimated to result in an additional \$10.2 billion in GSP over 30 years of operation, or around \$340 million per year. The estimate of additional GDP with the Project is therefore equivalent to around 2.4 percent in total (i.e. over 30 years) or around 0.1 percent each year.

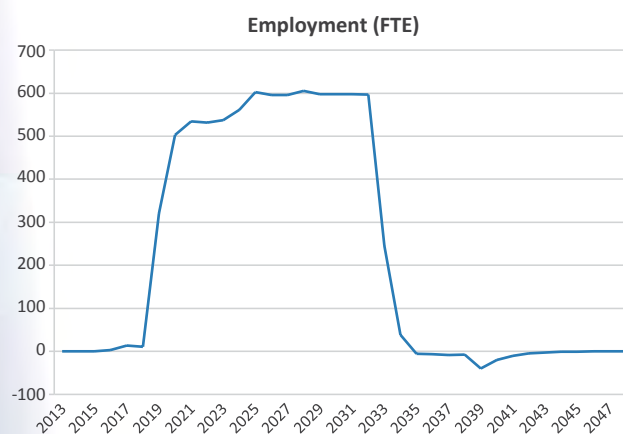
The estimates of South Australian Gross State Product (GSP) (\$10.2 billion) and exports (\$10.4 billion) are higher than those estimated for the entire Australian economy, reflecting that a greater proportion of inputs to construction/operation of the Project will be sourced from SA. In addition, resources such as labour and capital will be redistributed away from other states/territories in Australia. For this reason, SA is also forecast to experience greater peak employment during both the construction (630 FTEs) and operating (790 FTEs) phases of the Project.

Additional information about this economic assessment is available in Appendix D.1.

10.5.3.3. Impacts on the Regional Economy

The proximity of the Eyre and Northern SDs to Port Bonython means that they will be a major source of inputs for the construction and on-going operation of the Project e.g. labour and materials. It is estimated that over 70 percent of additional SA employment generated by the Project will be realised in the Eyre and Northern SDs, reaching a peak of 605 additional employees (FTE) in 2027/28 as shown in **Figure 10.5a**.

Figure 10.5a: Regional employment impacts (FTEs): Eyre and Northern SDs (Monash CoPS, 2013)



10.5.3.4. Economic Impacts of the BCEF not Proceeding

Without the BCEF, during the next 30 years this could potentially result in the loss of up to \$14.6 billion in direct export revenue as existing ports become capacity constrained in the future and/or the distances to alternative open access ports makes export commercially unviable.

10.6. Mitigation Measures

10.6.1. Local Scale Mitigation Measures

A number of measures which will mitigate socio-economic impacts have already been incorporated into the Project design. These include:

- » Grade separation (of rail crossing) of Port Bonython Road
- » The Coast Road will remain accessible at Stony Point
- » The jetty's conveyor will be enclosed to minimise dust and noise associated with transferring ore from the handling facility to ships
- » Onshore materials storage will be undertaken within sheds which will have dust suppression systems fitted
- » Jetty construction works will be timed to avoid annual GAC aggregation season inshore.

Additional mitigation measures required to address potential local scale impacts:

- » As the railway design progresses, where property accesses will be impacted, discussions with property owners will take place to determine an appropriate design solution to maintain access
- » The grade separated crossing of Port Bonython Road will seek to be designed to avoid introducing an at grade rail crossing to Fitzgerald Bay Road and Cuttlefish Drive.
- » On-going communication and engagement should occur with local residents, workers, Whyalla City Council, Santos, the Australian Defence Force and other adjacent Project proponents/property owners during the design, construction and operation of the Project
- » SGPL will liaise with False Bay residents to discuss the railway construction program to minimise noise impacts (especially related to any night works that may be required) when the rail construction site is in close proximity to the False Bay settlement
- » Major changes to traffic management (in accordance with approved traffic management plans) are to be communicated with Port Bonython Road users in advance of changes being implemented
- » SGPL will relocate the Stony Point Cuttlefish interpretive signage and viewing platform westwards. The form of this infrastructure is to be discussed with relevant stakeholders and the local community
- » A South Australian Industry Participation Plan will be prepared by SGPL for the Project and included in all tender documentation to ensure appropriate levels of local contractor involvement are maintained. This plan will also outline SGPL's plans for Indigenous training and employment.

10.6.2. Regional Scale Mitigation Measures

There are few social impacts on a regional scale that require mitigation or management with most regional impacts being positive in nature in relation to economic benefit and job creation.

SGPL is committed to employing from the local area as a priority. This will both improve the skills and experience of local people and reduce the need to find temporary accommodation for construction workers. To achieve this ratio, SGPL will work with local training providers and relevant industry bodies to up-skill local workers where possible so they can fill relevant positions. This may include working with Local Employment Coordinators from the Australian Government's Priority Employment Area initiative to assist with the delivery of the Port Augusta-Whyalla-Port Pirie Regional Employment Plan.

SGPL's approach to local employment will be detailed in an Industry Participation Plan (as described in **Section 10.3.2.5**) prepared to address the South Australian Industry Participation Policy. SGPL's approach to Indigenous training and employment will be detailed in an Indigenous Participation Plan. The requirements set out in these plans will need to flow on to tenderers who may be awarded contracts by SGPL.

Additional mitigation measures required to address potential local scale impacts:

- » Employment contracts and tenders will include clauses that require disciplinary action/dismissal if staff/contractors are found to be engaging in anti-social or disruptive behaviour whilst staying in short term accommodation while working on the BCEF.

10.6.3. Marine Environment Mitigation Measures

A number of mitigation measures have already been built into the Project description to address potential marine impacts. These include:

- » Piling will occur outside of the GAC aggregation period inshore to minimise impacts
- » The exclusion zone for the new jetty will be much smaller than for the existing jetty as the new jetty will not be handling explosive materials. Commercial and recreational vessels will be able to manoeuvre around the exclusion zone to the west.
- » Marine mapping and navigational aids to be updated according to the new exclusion zone prior to construction start. Changes to be notified via a Notice to Mariners.

10.7. Conclusions

Construction of the BCEF will result in some temporary disruption to access and amenity within the primary study area, but this will be managed through appropriate communication with stakeholders and traffic management activities. Post construction the project is not expected to have any significant impact on local settlements, access routes or adjacent land uses. The project will add to the industrial character of the area, but this is in line with land use zoning for the area. The project will not impact on any community facilities except for the AGC viewing area at Stony Point. SGPL will relocate the AGC viewing area to an appropriate local location.

Construction and operation of the new jetty will remove the area of the marine environment around the new structure from use. The exclusion zone around the jetty will only be 50m, which is significantly less than around the existing Santos jetty. Mariners will be notified of any changes to marine mapping and navigational aids. The impact on commercial fishing is expected to be negligible as limited commercial fishing occurs in the area where the jetty will be constructed. Recreational fishers will still have access to the Upper Spencer Gulf and will be able to manoeuvre in close proximity to the new jetty so impacts are also expected to be negligible.

From an economic perspective, construction and operation of the BCEF is expected to have a beneficial impact on the local economy in terms of jobs and economic contribution. This economic benefit extends to the State (forecast to add around \$10.2 billion to GSP in the next 30 years, or around \$340 million annually) and National (forecast to add around \$9 billion to GDP in the next 30 years, or around \$300 million annually). The project is expected to directly generate 270 FTE during construction and 40 FTE jobs during operation. Jobs will also be generated through flow on economic benefits in the South Australian (630 FTEs jobs during construction and 790 FTEs during operation). It is likely that the majority of these jobs will be located in the local Eyre and Northern Statistical Divisions of SA.

Without the BCEF, during the next 30 years this could potentially result in the loss of up to \$14.6 billion in direct export revenue as existing ports become capacity constrained in the future and/or the distances to alternative open access ports makes export commercially unviable.

10.7.1. Impact Assessment Summary

The potential impacts and benefits discussed in this chapter are summaries in **Table 10.7a**.

Table 10.7a: Impact Assessment

Primary Impacting Processes	Initial Assessment With Standard Mitigation (i.e. Statutory Compliance) in Place			
	Statutory Mitigation Measures Required	Significance of Impact	Likelihood of Impact	Risk Rating
Disruption to people’s way of life (in the vicinity of the study area) during construction of the BCEF.	n/a	Minor	Likely	Medium
Disruption to people’s way of life (in the vicinity of the study area) during operation of the BCEF.	n/a	Negligible	Unlikely	Low
Reduction in amenity in relation to noise, dust, visual etc. during construction.	n/a	Negligible Minor (in relation to noise for False Bay only)	Unlikely Possible (in relation to noise for False Bay only)	Low Medium (in relation to noise for False Bay only)
Reduction in amenity in relation to noise, dust, visual etc. during operation.	n/a	Negligible	Unlikely	Low
Disruption to access to settlements during construction	n/a	Minor	Likely	Medium
Disruption to access to settlements during operation	n/a	Negligible	unlikely	Low
Impact to community facilities in the vicinity of the primary study area during construction	n/a	Negligible Minor (in relation to AGC viewing area)	Unlikely Likely (in relation to AGC viewing area)	Low Medium (in relation to AGC viewing area)
Impact to community facilities in the vicinity of the primary study area during operation	n/a	Negligible	Unlikely	Low
Creation of jobs the Whyalla LGA and beyond as a result of construction and operation.	A South Australian Industry Participation Plan will be prepared by SGPL for the Project and included in all tender documentation to ensure appropriate levels of local contractor involvement are maintained. This plan will also outline SGPL’s plans for Indigenous training and employment.	Beneficial	Likely	Beneficial

Residual Assessment With Additional Mitigation In Place (i.e. Those Actions Recommended as Part of the Impact Assessment)			
Additional Mitigation Measures Proposed	Significance of Impact	Likelihood of Impact	Risk Rating
On-going communication and engagement should occur with local residents, workers, Whyalla City Council, Santos, the Australian Defence Force and other adjacent Project proponents/ property owners during the design, construction and operation of the Project.	Minor	Possible	Low
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
SGPL will liaise with False Bay residents to discuss the railway construction program to minimise noise impacts (especially related to any night works that may be required) when the rail construction site is in close proximity to the False Bay settlement.	Minor (in relation to noise for False Bay only)	Possible (in relation to noise for False Bay only)	Medium (in relation to noise for False Bay only)
n/a	n/a	n/a	n/a
Major changes to traffic management (in accordance with approved traffic management plans) are to be communicated with Port Bonython Road users in advance of changes being implemented As the railway design progresses, where property accesses will be impacted, discussions with property owners will take place to determine an appropriate design solution to maintain access The grade separated crossing (rail over road) of Port Bonython Road will be designed to avoid introducing an at grade rail crossing to Fitzgerald Bay Road.	Minor	Possible	Low
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
SGPL will relocate the Stony Point Cuttlefish interpretive signage and viewing platform to an adjacent area. The form of this infrastructure is to be discussed with relevant stakeholders and the local community.	Negligible	Unlikely	Low
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a

Primary Impacting Processes	Initial Assessment With Standard Mitigation (i.e. Statutory Compliance) in Place			
	Statutory Mitigation Measures Required	Significance of Impact	Likelihood of Impact	Risk Rating
Impact on existing economic activities in the primary study area.	Jetty construction works will not take place during the annual AGC aggregation season (May to August) – therefore limited impact on dive tourism.	Negligible	Unlikely	Low
Economic contribution of the project during construction and operation	n/a	High beneficial	Almost certain	High beneficial
Construction workforce living in short-term accommodation in Whyalla during construction	n/a	Beneficial (for local accommodation providers) Minor (for Whyalla residents)	Likely (for local accommodation providers) Possible (for Whyalla residents)	Beneficial (for local accommodation providers) Medium (for Whyalla residents)
Impact on commercial fishing during construction and operation.	n/a	Negligible	Unlikely	Low
Impact on recreational fishing during construction and operation.	n/a	Negligible	Unlikely	Low
Marine access to the area where the new jetty will be located.	The exclusion zone for the new jetty will be much smaller (only 50m) than for the existing jetty as the new jetty will not be handling explosive materials. Commercial and recreational vessels will be able to manoeuvre around the structure and its associated exclusion zone.	Minor	Likely	Medium

**Residual Assessment With Additional Mitigation In Place
(i.e. Those Actions Recommended as Part of the Impact Assessment)**

Additional Mitigation Measures Proposed	Significance of Impact	Likelihood of Impact	Risk Rating
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
n/a Employment contracts and tenders will include clauses that require disciplinary action/dismissal if staff/contractors are found to be engaging in anti-social or disruptive behaviour whilst staying in short term accommodation while working on the BCEF.	n/a Low	n/a Unlikely	n/a Low
n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a
Marine mapping and navigational aids to be updated according to the new exclusion zone prior to construction start. Changes to be notified via a Notice to Mariners.	Minor	Possible	Low