Government of South Australia

Eyre and Western Zone Emergency Management Plan

Version 1.0

December 2015

Eyre and Western Zone Emergency Management Committee (ZEMC)

(Note: To be read in conjunction with the Eyre and Western Hazard Risk Management Reports)

NOTE: This document has been designed for double sided colour printing.

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Eyre and Western Zone Emergency Management Committee pursuant to Section 27 of the State Emergency Management Plan.
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State Emergency Management Sub-committee members
State Mitigation Advisory Group members
Zone Emergency Management Committee members
Chief Executives of all Eyre and Western Councils
Chair of the neighbouring ZEMC, namely Far North ZEMC

Confidentiality Classification:

Classifications:		
Confidentiality	For Official Use Only	Information must only be shared on a need-to-know basis.
Integrity	[I2] Integrity 2	MODERATE requirement meaning that the Agency would be somewhat affected by a loss of integrity however the situation could be easily detected and recovered.
Availability	[A2] Availability 2	MODERATE requirement implying the loss would have a significant impact and recovery must be achieved within a period measured in days (typically three days or less).
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Approval:

Name	Title	Signature	Date
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1 Preface

1.1 About the Eyre and Western Zone Emergency Management Plan

1.1.1 The State Emergency Management Plan (SEMP)[1] requires that each Zone Emergency Management Committee (ZEMC) will develop a plan using an all hazards and comprehensive approach[2] across the full prevention, preparedness, response and recovery (PPRR) spectrum. The Eyre and Western Zone Emergency Management Plan (ZEMP) outlines the high priority risks, responsibilities, authorities and the mechanisms to prevent or if they occur manage, and recover from, incidents and disasters that could occur in the Eyre and Western Zone. Disaster risks have local and specific characteristics that need to be understood within the context of the Zone i.e. the climate, geography, demography, industry, community capacity, assets and infrastructure etc. This detail can be found in Annex_A of the ZEMP. The plan is intended for use as a reference document in relation to emergency management in the Eyre and Western Zone.

1.1.2 Detailed operational response, relief and recovery arrangements for emergencies and disasters that occur in the Eyre and Western Zone are not part of this plan. Some detail on these arrangements may be available by contacting the relevant agency subject to classification levels.

1.1.3 The ZEMP relies on strong, cooperative, coordinated and consultative relationships among State Government agencies and Local Governments. State Government agencies and Local Governments will also be required to maintain effective relationships with other service and equipment owners and operators to ensure that an efficient and coordinated response can be made to any emergency.

1.1.4 The ZEMP supports integrated emergency management planning from the local level to the Zone/Regional level up to the State level.

1.1.5 The SEMP establishes and gives authority to the State's eleven Zone Emergency Management Committees (ZEMCs) to provide regional leadership in emergency management. The committees have a risk assurance and governance role in the Zone.

1.2 Distribution

1.2.1 A hard-copy of the ZEMP will be distributed to the following parties upon the release of a new version:

- Chair of the State Mitigation Advisory Group (SMAG)
- Eyre and Western ZEMC Members
- Chief Executive of all Councils within the Eyre and Western Zone
- Chair of the neighbouring ZEMC, namely:
  - Far North ZEMC.

1.3 Monitoring and Reviewing

1.3.1 The Eyre and Western Zone Emergency Management Committee (ZEMC) is responsible for preparing, updating and reviewing the Eyre and Western ZEMP.

1.3.2 By 30 August each year the Eyre and Western ZEMC will review the Eyre and Western ZEMP and submit it to the State Mitigation Advisory Group for assurance.

[1] SEMP can be located at http://www.ses.sa.gov.au/site/about_us/about_the_ses/legislation.jsp
[2] All hazard and comprehensive approaches are defined in the Glossary

1.4 Document control

1.4.1 The Eyre and Western ZEMC will ensure that copies of the ZEMP and other related Plans are supplied to the State Emergency Services for storage on Objective.

1.4.2 Enquiries regarding the ZEMP should be directed to:

Zone Emergency Risk Management System Project Manager
SA Fire and Emergency Services Commission (SAFECOM)
Level 6, 60 Waymouth Street, Adelaide 5000
Telephone: 8463 4187
Email: EmergencyManagement.SAFECOM@safecom.sa.gov.au

2

Legal & Administrative Framework

2.1 South Australian Emergency Management Arrangements

2.1.1 Emergency management arrangements in South Australia are governed by the State *Emergency Management Act, 2004* (the Act). Section 9(1)(b) of the Act requires the State Emergency Management Committee (SEMC) to prepare and keep under review the State Emergency Management Plan (SEMP).

2.1.2 The SEMP describes South Australia's emergency management framework. It explains State and inter-jurisdictional coordination arrangements and defines the roles and responsibilities of the State's emergency management committee structure.

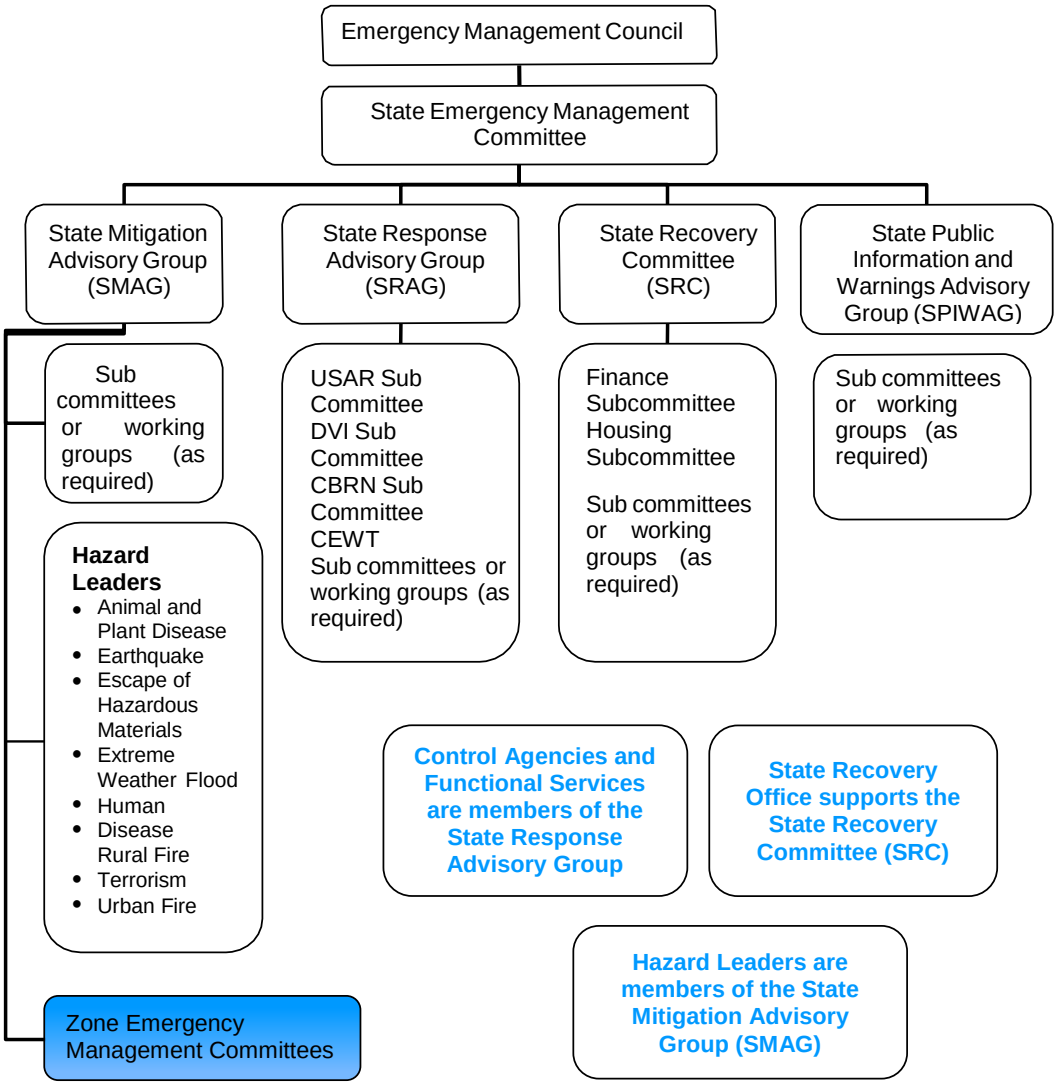


Figure 1 - South Australian Emergency Management Committee Structure

2.1.3 There are eleven emergency management Zones (four Adelaide metropolitan and seven regional Zones). These Zones align with the twelve State Government Regions (the Adelaide Hills and Fleurieu Region is combined with the Kangaroo Island Region to form one Emergency Management Zone).

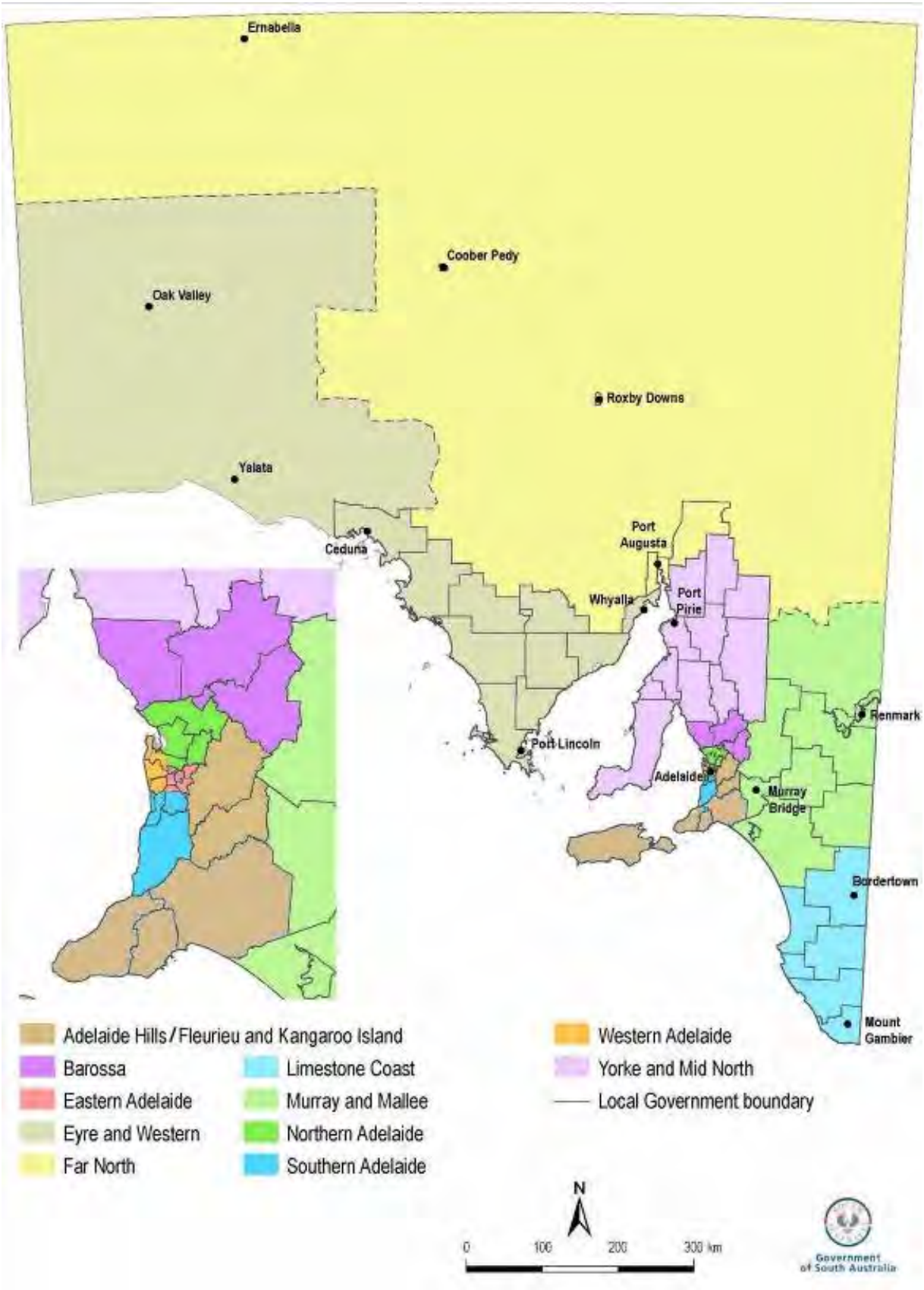


Figure 2 - South Australian State Government Regions

2.2 Advisory Groups

2.2.1 Advisory Groups have the role of providing an oversight role for the areas of Prevention, Preparedness, Response and Recovery. The following Advisory Groups have been established:

- **State Mitigation Advisory Group (SMAG)** – responsible for prevention and preparedness
- **State Response Advisory Group (SRAG)** – responsible for response activities including the Functional Services
- **State Recovery Committee (SRC)** – responsible for the recovery activities including integration with response activities
- **State Public Information and Warnings Advisory Group (SPIWAG)** – provide guidance, advice of best practice and a forum for continuous improvement in public information and warnings across all prevention, preparedness, and response and recovery activities.

Further information regarding the roles and responsibilities of these Advisory Groups is available in the SEMP.

2.3 Hazard Leaders

2.3.1 Hazard Leaders ensure the coordination of all aspects of the State's approach to each hazard, ranging from mitigation through to response and recovery. Further information regarding Hazard Leaders is available in the SEMP.

2.3.2 Risk assessments relative to the hazard are a key role of a Hazard Leader. The Eyre and Western ZEMC contributes to the State risk assessments for relevant hazards and Hazard Leaders in turn contribute to the Eyre and Western ZEMC risk assessments.

Table 1 – Hazard Leaders

Hazard	**Hazard Leader**
Animal and Plant Disease	Primary Industries and Regions South Australia
Earthquake	Dept for Planning Transport and Infrastructure
Escape of Hazardous Materials	Safe Work SA – Dept of the Premier and Cabinet
Extreme Weather	SA State Emergency Service
Flood	Dept of Environment, Water and Natural Resources
Human Disease	Dept for Health and Ageing
Rural Fire	SA Country Fire Service
Terrorism	SA Police
Urban Fire	SA Metropolitan Fire Service

2.4 Control Agency

2.4.1 A Control Agency is responsible for resolving an emergency relevant to its area of expertise (see table below). The Control Agency works in conjunction with the Coordinating Agency (SA Police) to take control of the response to an emergency. The responsibilities of a Control Agency include:

- take control of the response to the emergency (including the appointment of an incident controller and management structure);
- ensure a safe working environment and safe systems of work;
- ensure effective liaison, communication and cooperation with all involved;

- continually assess the situation, identify risks and share information with all involved;
- develop and share plans and strategies that meet the requirements of all agencies responding to the emergency (Incident Action Plan);
- implement and monitor the Incident Action Plan;
- ensure the effective allocation and use of available resources;
- ensure the public is adequately informed and warned so as to enhance community resilience
- facilitate the investigation of the emergency and review of response activities; and
- ensure transition from response to recovery, including the coordinated handover to the state recovery arrangements.

Table 2 – Control Agencies	
Emergency Incident	**Control Agency**
Aircraft Accident	South Australia Police
Animal, Plant & Marine Disease	Primary Industries and Regions South Australia
Bomb Threat	South Australia Police
Earthquake	South Australia Police
Fire (Rural & Metro)	SA Country Fire Service or SA Metropolitan Fire Service respectively
Flood	South Australian State Emergency Service
Food / Drinking Water Contamination	SA Health
Information & Communication Technology	Department of the Premier and Cabinet (Office for Digital Government (ODG))
Fuel, Gas & Electricity Shortages	Department for Manufacturing, Innovation, Trade, Resources and Energy
Hazardous or Dangerous Materials Emergencies (including inland water oil spill)	SA Country Fire Service or Metropolitan Fire Service
Siege / Hostage	South Australia Police
Human Epidemic	SA Health
Marine Transport Accidents	South Australia Police
Oil Spills – Marine Waters	Department of Planning, Transport and Infrastructure
Rail Accident	South Australia Police
Riverbank Collapse	South Australia Police
Road / Transport Accident	South Australia Police
Search & Rescue – Land & Sea	South Australia Police
Search & Rescue – Structure (USAR)	Metropolitan Fire Service or State Emergency Service
Extreme Weather	State Emergency Service
Terrorist Incident	South Australia Police

2.5 Coordinating Agency

2.5.1 South Australia Police is the Coordinating Agency for all emergencies unless otherwise stated in the SEMP. The role of the Coordinating Agency is to ensure the Control Agency effectively responds to and manages an emergency incident, the threat is clearly understood, and Supporting Agencies provide an appropriate level of support.

2.6 Functional Services

2.6.1 Functional Services are a group of agencies required to perform functional roles that support response and recovery activities during an emergency. Functional Services contribute to the coordination role of the State Emergency Centre (SEC). A State Controller heads each Functional Service.

2.7 Framework of Plans

2.7.1 The planning model applied in South Australia integrates the planning activities of ZEMCs and other committees and agencies. Planning processes are collaborative between state government, local government, non-government organisations and the community.

2.7.2 The State's Emergency Management Arrangements are detailed in the SEMP, which is further supported by Hazard Plans, Support Plans, Functional Service Plans, the State Emergency Centre Manual, Zone Plans and the Zone Emergency Centre Manual. This planning framework for emergencies is outlined in Table 3. Further information on the planning model is available in the SEMP.

Table 3 - Emergency Planning Framework

Plan	Responsibility for Maintenance	Assurance	Authority
State Emergency Management Plan ▪ **Legal and Administrative Framework**	SA Police		Chair, State Emergency Management Committee and the State Coordinator
▪ **Prevention**	State Mitigation Advisory Group		
▪ **Preparedness**	State Mitigation Advisory Group		
▪ **Response**	State Response Advisory Group		
▪ **Recovery**	State Recovery Committee		
Hazard Plans	Hazard Leader Organisation	State Mitigation Advisory Group	Hazard Leader (Agency CE)
Supporting Plans	Lead Agency (as nominated by the State Response Advisory Group)	State Response Advisory Group	Lead Agency (CE)
Functional Service Plans	Functional Service	State Response Advisory Group	State Controller
Zone Emergency Management Plans	ZEMC	State Mitigation Advisory Group	ZEMC Chair

2.8 Eyre and Western Zone Emergency Management Committee

2.8.1 The Eyre and Western Zone Emergency Management Committee (ZEMC) is responsible for planning and implementing Zone-level actions in support of the State Emergency Management Plan. The ZEMC will use an all hazards approach across the full PPRR spectrum to conduct emergency risk assessments compliant with the approved risk management process; identify and evaluate risk treatment options and develop Risk Treatment Plans; and develop a Zone Emergency Management Plan, and other plans, as required.

2.9 Zone Emergency Management Committee Membership

2.9.1 The Eyre and Western ZEMC consists of:

- ZEMC Chairperson
- Zone Emergency Management Coordinator
- Zone Recovery Planner
- Executive Officer
- ZEMC Members.

Further details, including role descriptions, are located in the SEMP.

2.10 Zone Emergency Management Committee Working Groups

2.10.1 The Eyre and Western Zone Emergency Centre Committee (ZECC) reports to the Eyre and Western ZEMC through the Zone Coordinator. The ZECC is chaired by the Zone Coordinator and has been established to oversee the planning for the response and recovery activities of the Zone Emergency Centre (ZEC) at Port Lincoln. The ZEC may be activated in support of the Control Agency during the response and/ or recovery phases of an emergency incident.

2.11 Zone Emergency Management Committee Operating Guidelines

2.11.1 In accordance with Section 9(1)(e) of the Act, the State Emergency Management Committee has developed Operating Guidelines for ZEMCs. These guidelines are found as an Annex of the State Emergency Management Plan (SEMP). They have been prepared to guide and assist ZEMCs to:

- meet obligations to the State Emergency Management Committee, the State Coordinator, State Advisory Groups and the SEMP
- understand their roles and responsibilities
- prepare and maintain a Zone Emergency Management Plan.

2.12 Local Government Emergency Management Arrangements

2.12.1 Under Section 7 of the Local Government Act, (1999), a Council is required to:

- Take measures to protect its area from natural and other hazards and to mitigate the effects of such hazards.
- Provide infrastructure for its community and for the development within its area (including infrastructure that helps to protect any part of the local or broader community from any hazard or other event, or that assists in the management of any area).

2.13 Local Government Planning

2.13.1 Local Government are actively engaged in a wide range of emergency management activities e.g. land use planning, storm water maintenance, flood mitigation works, land management, fire prevention, building safety, road and traffic management and public health programs.

2.13.2 Local Government contribute to the Eyre and Western Zone works that prevent emergencies from arising or minimising the impact of the emergency. During the course of an emergency, local government supports emergency services and other agencies in response and recovery operations.

2.13.3 Local Government Community Emergency Risk Management (CERM) Plans are a valuable source of information about identified emergency risks within the Zone. The Eyre and Western ZEMC consulted the relevant Council CERM Plans for the Zone during risk management activities.

2.14 Emergency Management Training

2.14.1 Training has an important role in contributing to emergency preparedness. The SES coordinates emergency management training in SA. The Eyre and Western ZEMC may make direct contact with the SES to access this training as appropriate.

3

About the Zone

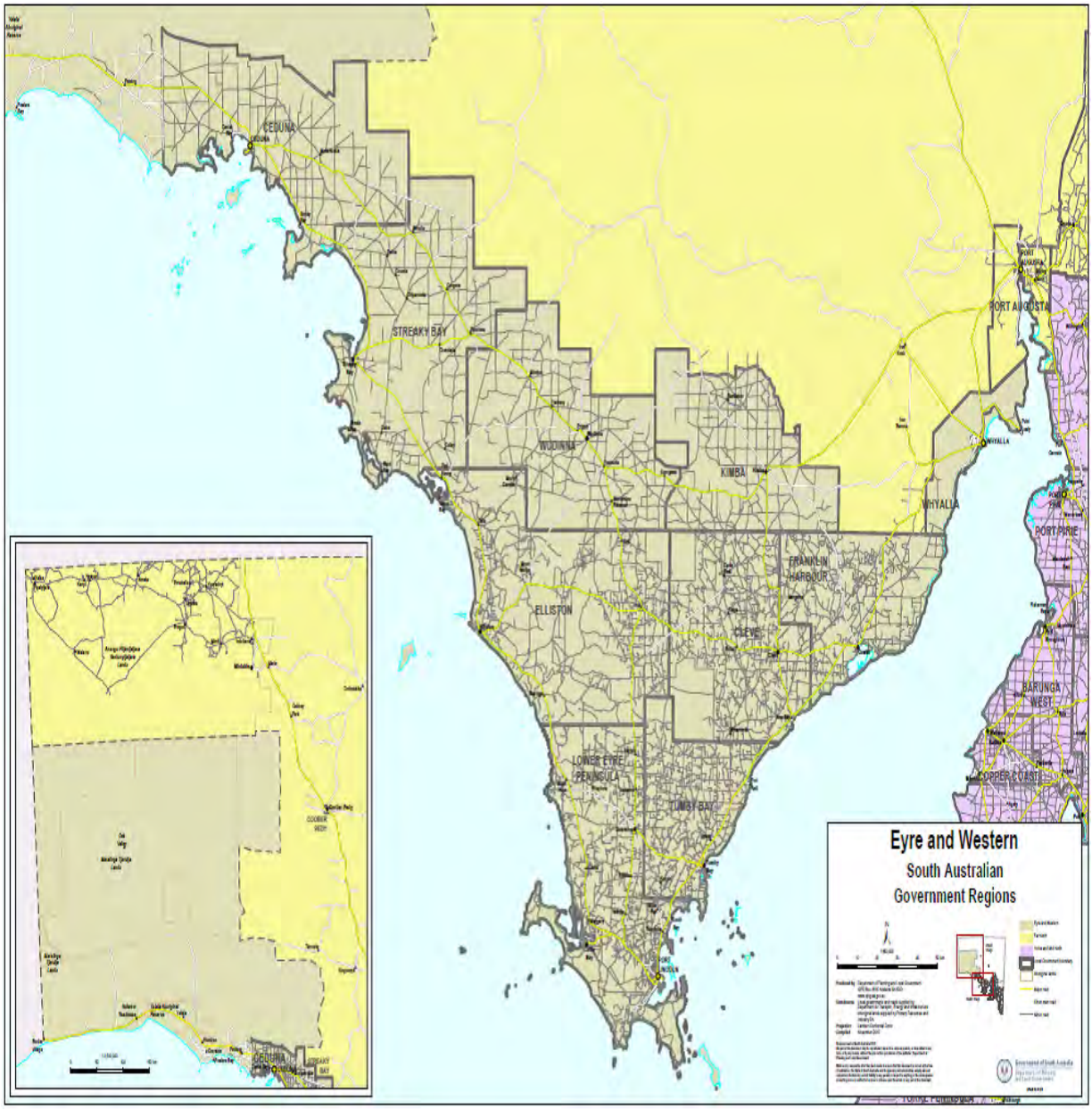


Figure 3 – Eyre and Western Zone Map

*For further detailed Zone Context information see Annex A

Note: 2006 ABS Census data was used for the Eyre and Western Zone Emergency Risk Management workshops. The detailed zone context information in Annex A includes both 2006 and the latest ABS data information and provides a comparison between the two where available.

3.1 Geography

3.1.1 The Eyre and Western Zone covers more than 230,000 square kilometres, extending from Whyalla in the east to South Australia's border with Western Australia in the west. It includes more than 1,800 kilometres of coastline, or about 33% of the coastline of South Australia. The geographical relief is gentle and low, with most areas less than 150m above sea level. The largest hills are located in the Gawler Ranges with peaks reaching 500m. The Koppio Hills, covering an area of about 100 km², are the most significant topographical feature in the southern part of the region.

3.1.2 Most of the region is managed by individual landowners, local and State Government agencies, and industries with all contributing to the sustainability of the natural resources. Unique habitat areas have been preserved in parks, reserves and, increasingly, on private landholdings. The competing priorities of the businesses that profit from the region's resources, the community that depends on the resources for their lifestyle, and the agencies managing reserved habitat areas are very evident.

3.2 Climate & Weather

3.2.1 Eyre Peninsula enjoys a mild Mediterranean climate – a couple of degrees cooler than Adelaide in the summer, and a degree or two warmer in the winter. Warm days are followed by cool, balmy evenings, with winters usually mild providing a great opportunity for a relaxed outdoor lifestyle.

3.2.2 Average maximum temperatures range from 25°C to 29°C near the coast to 34°C inland. During winter, the average maximum temperatures range from 15°C to 18°C.

3.3 Area & Population

3.3.1 Nearly 65% of the region's population live in the three urban centres of Whyalla, Port Lincoln and Ceduna.

3.3.2 The Whyalla and Eyre Peninsula region has a population of almost 59,000 people or 3.6% of South Australia's total population. Just over 64% of residents live within local government areas of Whyalla and Port Lincoln. The City of Whyalla is the largest population centre with 23,214 followed by the City of Port Lincoln which has a population of 14,726 (ABS, Estimated Resident Population, at June 2010).

3.3.3 The 2006 Census shows that the Whyalla and Eyre region has a significant Indigenous population with 2,784 people or 4.8% of the total population being of Indigenous origin - significantly above the State average of 1.7%. The regional Indigenous populations are concentrated in Ceduna, Port Lincoln and Whyalla. Since the 2001 Census the region's Indigenous population has increased by 17.4%. Ceduna has experienced the greatest growth with a 13.8% increase.

3.3.4 Australian-born people comprise 95.3% of the regional population well above the State average of 74.0%. The cultural diversity of the region is primarily European, with the largest groups being people born in Germany, the Netherlands, and the United Kingdom.

3.3.5 The ongoing expansion and diversification of the region's industry sectors (agriculture, fishing, aquaculture, tourism, mining, processing and manufacturing activity); the increasing demand for education and health services and the emergence of renewable energy initiatives will attract more people to Whyalla and Eyre Peninsula in the future.

3.4 Community Capacity

3.4.1 Emergency Services are spread throughout the Zone. Historically major incidents have been bushfires.

3.4.2 Emergency Services available include, the Country Fire Service (CFS), Metropolitan Fire Service (MFS), the State Emergency Service (SES), the South Australian Police (SAPOL), South Australian Ambulance Service (SAAS), Australian Volunteer Coast Guard and Sea Rescue Squadron, Department of Water, Natural Resources (DEWNR) can assist in bushfire fighting operations when requested, health services and community based organisations.

3.4.3 Local government resources are available to assist during emergencies, but may be under extreme pressure to cope during very large incidents, due to their priority to maintain council services, their workforce size and land area.

3.5 Industry

3.5.1 Eyre Peninsula is one of South Australia's most productive regions generating an estimated $2.4 billion in revenue annually. The region is highly export oriented with around $1.76 billion of product being sent to various overseas markets.

3.5.2 The region's economy relies on agriculture, aquaculture, fishing, tourism and mining as the main industries. While the agricultural and fishing sectors are well established, aquaculture and tourism have developed more recently as major sources of employment and revenue for regional communities. The City of Whyalla is unique having a substantial industrial base, which is focussed on mining, engineering and steel production facilities.

3.6 Public Buildings, Spaces & Events

3.6.1 While the majority of the region can be considered rural, there are many places where people gather and some significant events that can draw crowds from Adelaide and interstate.

3.6.2 The region has many important sites and attributes of Aboriginal heritage as well as sites of non-aboriginal heritage, colonial exploration sites, war memorials and peace gardens. It also has many natural objects of significance. A major event held each January in Port Lincoln is the Tunarama Festival.

3.7 Significant Infrastructure

3.7.1 Health facilities, Local Government offices, transportation (road, air and sea links – ferry service located at Lucky Bay), fuel supply and distribution network, food supply and distribution network, ICT services infrastructure (banks, ATM's).

3.7.2 The majority of emergency services have cross brigade/station agreements to ensure coverage if an incident affects the emergency services infrastructure.

3.7.3 Important Government infrastructure includes the Government Radio Network, infrastructure of essential services, and telecommunication infrastructure. Port Lincoln is the regional base for a significant number of government agencies.

3.7.4 Extensive infrastructure includes four of the state's ten major export ports, three major regional airports and connections to the national road and rail networks.

3.7.5 The region's three main airports are located at Port Lincoln, Whyalla and Ceduna and are licensed by the Civil Aviation Safety Authority. Port Lincoln is South Australia's busiest regional airport, with in excess of 190,000 passengers annually. Whyalla's passengers' number 60,000 per annum and Ceduna passenger numbers have grown to approximately 25,000 per annum.

3.7.6 A pipeline between Kimba and Iron Knob connects the region to the State's mains water distribution network supplementing the Tod-Ceduna system with an additional 1.4GL of water from the River Murray.

3.7.7 Natural gas is supplied to the Eyre Peninsula region from the Moomba to Adelaide pipeline via a lateral line diverted to Whyalla under the Spencer Gulf. OneSteel is the main user of the gas, which also supplies homes and other businesses in Whyalla. The wider Eyre Peninsula is not connected to the gas pipeline and is reliant on bottled gas supply.

3.8 Essential Services

3.8.1 **State Government & Utilities**

- Water supply and distribution
- Waste water treatment

- Power supply and distribution
- Gas supply and local LPG networks
- Telecommunications services
- Transportation – Road and rail
- Health Services
- ICT services – Banking, Fuel, Health

3.9.2 **Community**

- Health and support services
- Local Government services
- Transportation – Roads, Sea and Air
- Fuel and food supply and distribution

3.9 Hazardous Sites

3.9.3 **Major Hazard Facilities**

- Wastewater treatment plants (Chlorine and other chemicals)
- Agricultural Chemical depots
- Fuel distribution depots
- Transport depots

3.9.4 **Hazardous Materials and Sites**

- Hospitals (nuclear medicine)
- Small fuel storages – service stations
- Waste disposal sites
- Building sites
- Industrial processes / sites
- Agricultural / Horticultural chemicals
- Livestock chemicals
- Transport links

4 Risk Assessment

4.1 Risk Assessment

4.1.1 Under the State Emergency Management Plan, the Zone Emergency Management Committee (ZEMC) is responsible for using "an all hazards approach and working within the Zone Emergency Risk Management Framework methodology to ensure that emergency risks to a zone are identified, analysed and evaluated, community vulnerabilities are considered, treatment options are identified and residual risk is managed through a Zone Emergency Management Plan (ZEMP)."

4.1.2 The Eyre and Western ZEMC is required to undertake and review emergency management risk assessments within its Zone. It is committed to undertaking risk assessments associated with emergencies to guide the planning activities within its Zone. When prioritising the emergencies to be assessed the ZEMC must consider the nine state hazards identified in the SEMP, these being:

- Animal and plant disease
- Earthquake
- Escape of hazardous materials
- Extreme weather
- Flood
- Human Disease
- Rural Fire
- Terrorism
- Urban Fire

4.1.3 As much as practicable, and in consultation with the relevant Hazard Leader, the ZEMC will conduct risk assessments using a consistent methodology such that they can be compared against and contribute to assessments from other Zones as well as state based risk assessments.

4.1.4 In accordance with State and National emergency risk assessment priorities, the ZEMC will use the National Emergency Risk Assessment Guidelines (NERAG), which are based on the Risk Management Standard (AS/NZS ISO 31000), as the basis of the methodology of its risk assessments.

4.1.5 The ZEMC will plan and implement a program of risk assessments for its Zone to inform the development and review of its Zone Emergency Management Plan. The detailed results of each of the risk assessments will be recorded in the Risk Registers and the accompanying risk management reports.

4.1.6 For further, detailed information, including prioritised risks and risk registers, please refer to the Eyre and Western Risk Management Reports.

For official use only

5 Major Hazards

5.1 Eyre and Western Zone Major Hazards

5.1.1 The Eyre and Western ZEMC prioritised extreme weather (extreme storm and extreme heat), rural fire and animal and plant disease as the first three hazards to be assessed in this zone.

5.1.2 Earthquake and Human Disease hazards were assessed once the priority hazard risk assessments were completed.

5.1.3 The risk assessment, analysis and treatment process is a detailed and extended process, incorporating a large amount of input from stakeholders and experts. To ensure that the outputs are being communicated in a timely fashion, this section is being released as a work in progress. As each hazard is assessed, further sections will be incorporated into the plan.

5.2 Extreme storm

5.2.1 The risks from an extreme storm to the Eyre and Western (E&W) Zone include impacts to people, the environment, the economy, public administration, the social setting and infrastructure. Extreme storms considered were 1 in 2 year, 1 in 70 year and 1 in 1,000 year events.

5.2.2 It was agreed to consider an extreme storm event occurring within the Eyre and Western Zone because the vulnerabilities identified at the context workshop would make this area particularly susceptible to extreme storm impacts. The E&W Zone also has a history of being affected by extreme storm events.

5.2.3 The first scenario (1:2 year severe storm event – ARI < 3 years) was based on the 17 Dec 2011 Whyalla and Kimba thunderstorm event in which Whyalla received 25mm rain in 10 minutes and golf ball sized hail. Power was cut to approx. 25,000 people and the SES received over 400 calls for assistance.

5.2.4 The second scenario (1:70 year extreme storm event – ARI 31-300 years) was based on the 31 July 2010 Penola Tornado which lasted for 5 minutes and left 6 km path of destruction through the town and surrounding farm land – 40-50 metres wide, damaging over 40 buildings. Half an hour after the tornado, several significant storms involved destructive winds ahead of a vigorous cold front. Winds of approx. 180 km/h (Low F2 on Fujita Scale) removed roofing on many properties, many trees were uprooted, fences and light poles were damaged, water tanks and sheet metal was strewn across the town. Two people suffered cuts and cost was estimated at $7 million. Reference to Pt Lincoln Tornado in 1930 was also provided which too lasted for 5 minutes and left a 100 metre path of destruction.

5.2.5 The third scenario was a hypothetical synoptically driven storm event (1 in 1,000 year event), triggering smaller scale very dangerous supercell thunderstorms moving across populated areas of the zone. This would be a long-lived and wide spread event across the State with the catastrophic impacts.

5.2.6 Analysis of risks using the NERAG risk criteria found that the top ten risks for the zone all related to financial loss to the economy, displacement of people, serious injury/death to people and environmental impacts. Of the financial losses the loss of productivity was the greatest risk, followed by the unrecoverable loss due to damage to State Government Infrastructure. The risk of death and serious injury to people came from the health of vulnerable and non-vulnerable people and the environmental risks were in relation to damage to top soils.

5.2.7 The recommended actions to mitigate the top risks include:

The controls prioritised for improvement in order to mitigate extreme storm risks in the zone are:

- Develop a multi-faceted communication strategy to deliver messages to the community on what to do to avoid harm to themselves, their families, friends and neighbours during extreme storm events.
- Increased promotion of business continuity planning to private businesses with supporting information to assist in plan development.
- Test the effectiveness of the Alert SA messaging and website information for extreme storm to the community.

- Test the effectiveness of SES Warnings for extreme storm to the community.
- Seek assurance from Department for Communities and Social Inclusion (DCSI) that Government Home Care services' business continuity planning is reviewed against agreed evaluation criteria and exercised annually.
- Seek assurance from non-government Home Care Services that their business continuity planning is reviewed against agreed evaluation criteria and exercised annually.
- Seek assurance from public hospitals that business continuity planning is reviewed against agreed evaluation criteria and tested regularly.
- Seek assurance from DCSI that the Displaced Person's Accommodation support plan is exercised and tested.
- Seek assurance from SAPOL that the SEMP evacuation guidelines are current and regularly tested.
- Liaise with State Recovery Office to either exercise or understand how the Community Recovery Package would be implemented after a disaster.
- Promote the benefits of insurance to businesses in the zone to reduce financial loss from damaged/destroyed stock and equipment.
- Promote the benefits of insurance to businesses in the zone to reduce financial loss from loss of income.
- Promote the benefits of insurance to businesses in the zone to reduce financial loss from Business Interruption.

The recommended actions for Local Government to mitigate their top extreme storm risks are:

- By end of 2016 every council's business continuity plan is reviewed against council/LGA agreed evaluation criteria which includes extreme storm to ensure it meets a high standard and is exercised annually.
- Assist in development of the Zone Emergency Management Plan.
- Identify the gap between buildings which comply with building codes in relation to resistance to strong winds and which buildings do not.
- Review extreme Storm information (website links, leaflets, information sessions etc) available through councils.
- Review cost recovery arrangements for uninsured assets vulnerable to damage from Extreme storm, including availability of funding from the Local Government Disaster Recovery Assistance Guidelines.
- Review the potential capacity issues in relation to Environmental Health Officers following an extreme storm event.

Risk treatments prioritised for further investigation and possible implementation were:

- Hazard Leader to engage with regulators, industry sectors and training organisations to promote and seek assurance regarding application of building codes to mitigate disaster impacts on built structures.
- Clarify powers, responsibilities and approvals required to manage buildings, rapid damage assessment and their reoccupation following major storm damage.
- Promote mitigation research that provides evidence for reducing exposure to risk.
- SES to investigate the feasibility of developing a repository of all information and research relevant to the extreme storm hazard and planning for it.
- Undertake a lifelines study to examine vulnerabilities and interdependencies of essential services in the zone with a view to retrofitting critical systems where necessary.
- Promote self-reliance messages for community resilience. The aim is to communicate with and educate the community about their risk profile on an all hazards basis including how to create emergency plans and understand health advice. Education to include "self-help" for the event and the recovery process.
- Promote post disaster demolition policy to all buildings including heritage listed buildings.
- Seek assurance from Health SA that the Mental Health annexure to the Mass Casualty Plan is in place and addresses all hazards.
- SES to progress a collaborative research program to jointly conduct detailed severe wind exposure, vulnerability and risk modelling for SA.
- SES to promote the strategy of insurance as part of general resilience building to the community (including businesses)
    - Develop disaster waste management planning including capability and capacity issues.
    - SES and other agencies/insurance council/business representatives jointly develop and communicate with and educate the community and business about vulnerabilities and the need for insurance, business continuity plans and business recovery plans. Engage business associations, industry representatives and community groups to promote regular reviews of insurance cover and type, and the need to update business continuity plans and/or business recovery plans.

- Review the adequacy of existing mutual aid arrangements and develop agreed operational protocols between Local Government councils.
- SMAG, the SRO and other NGOs (Red Cross) through the Vulnerability Sub-Committee identify vulnerable persons and groups and develop strategies and mitigation processes to strengthen the resilience of these people.
- Post disaster building review of predetermined relief centre sites for the structural and functional adequacy of these buildings which are having a post disaster function considering all hazards scenario.
- Assistance to specific indigenous communities and remote communities in preparing for extreme storm events.
- Ensure appropriate Hazmat plans are in place to handle multiple location, incident, simultaneous hazmat spills.
- Assessment of potentially damaging trees.
- Seek direction from State Response Advisory Group as to the hazard leader/control agencies for landslide/landslip.

5.3 Extreme Heat

5.3.1 The risks from extreme heat to the Eyre and Western Zone include impacts to people, the environment, the economy, public administration, the social setting and infrastructure. Extreme heat events considered were 1 in 2 year, 1 in 70 year and 1 in 1,000 year events.

5.3.2 It was agreed to consider an extreme heat event occurring within the Eyre and Western Zone because the vulnerabilities identified at the context workshop would make this area particularly susceptible to extreme heat impacts. The E&W Zone also has a history of being affected by extreme heat events.

5.3.3 The first scenario (1 in 2 year event) was based on the March 2008 heat event with 13 consecutive days with a max temp >37.8°C (in Adelaide), causing at least $150 million in extra costs and reduced income for South Australia. The second scenario (1 in 70 year event) was based on the January/February 2009 heat event which ran for 16 consecutive days across South Australia, Victoria, southern New South Wales, Australian Capital Territory and northern Tasmania with temperatures up to almost 49°C recorded and over 370 deaths in Victoria from Extreme Heat related illnesses.

5.3.4 The third scenario (1 in 1,000 year event) was based on a hypothetical combination of the extended period of the 2008 event and the intensity of the 2009 event with expected breakdown of utility supplies. Increased load on SAAS and hospitals, hundreds of deaths, outdoor work ceases and food shortages due to utility breakdown.

5.3.5 Analysis of risks using the NERAG risk criteria found that the top ten risks for the zone all related to either financial loss to the economy or serious injury/death to people. Of the financial losses, the impacts on agriculture and livestock were the greatest risks. The risk of death and serious injury to people came from the health of vulnerable and non-vulnerable people as well as disruptions to the health system causing death and serious illness to people.

5.3.6 The recommended actions to mitigate the top risks include:

The controls prioritised for improvement in order to mitigate extreme heat risks in the zone are:

- Develop a multi-faceted Community Education Strategy to deliver messages to the community on what to do.
- Test the effectiveness of SES warnings for the transmission of information relative to extreme heat.
- Review the treatment options for the highest priority risks and test the effectiveness of the Alert SA Website for the effectiveness of the transmission of information for extreme heat.
- Seek assurance from Department for Education and Child Development (DECD) to complete the review of all hazards information pack which includes school closures in some instances and inform the relevant stakeholders.
- Increased promotion of business continuity planning to private businesses with supporting information to assist in plan development such as the development of a local business EM and recovery guide and development of post disaster networks through which Recovery support may be funnelled.
- Seek assurance from Government Home Care services that they have reviewed their response and recovery capabilities.

- Seek assurance from non-government Home Care Services that their business continuity planning is reviewed against agreed evaluation criteria and exercised annually.
- Seek assurance from Public Hospitals that their Business Continuity Plans (BCPs) are in place current and regularly tested.
- Seek assurance from Private Hospitals that their Business Continuity Plans (BCPs) are in place current and regularly tested
- Promotion of the benefits of insurance to businesses in the zone to reduce financial loss from damaged/destroyed stock and equipment.
- Promotion of the benefits of insurance to businesses in the zone to reduce financial loss from loss of income
- Promotion of the benefits of insurance to businesses in the zone to reduce financial loss from Business Interruption.
- Seek assurance from Primary Industries and Regions SA (PIRSA) that Veterinary response plans and in place, current and tested.

The recommended actions for Local Government to mitigate their top extreme heat risks are:

- Complete the Zone Emergency Management Plan (ZEMP) and review effectiveness of treatment options.
- Ensure all new homes and care facilities to incorporate design features, structures and cooling to assist with mitigating the impacts of extreme heat events.
- Review extreme heat information (website links, leaflets, information sessions etc) available through councils.
- Review Council business continuity plans and exercise them.
- Conduct research into the capacity of Health Inspectors following an extreme heat event.
- Review Local Government Extreme heat guide and encourage local councils to utilise it.

Risk treatments prioritised for further investigation and possible implementation were:

- SES to promote self-reliance message for community resilience. The aim is to communicate with and educate the community about their risk profile on an all hazards basis including how to create emergency plans and understand heat health advice. Education to include “self-help” for the event and the recovery process.
- State Mitigation Advisory Group (SMAG), the State Recovery Office (SRO) and other Non-government Organisations (NGOs i.e. Red Cross) through the Vulnerability Sub-Committee identify vulnerable persons and groups and develop strategies and mitigation processes to strengthen the resilience of these people.
- SES to develop a Natural Disaster Resilience Program (NDRP) business case for a scoping study into the impacts of Extreme Heat events on the economy and built environs (infrastructure) and develop mitigation strategies to reduce these impacts where possible.
- Identify key environmental, economic and social characteristics within the Eyre and Western Zone. Identify local changes expected from climate change, assign level of risk and adaptive capacity to determine overall vulnerability.
- Develop specific messaging to be distributed with extreme heat warnings, highlighting the need for caution regarding branch drop; and water safety – drownings.
- Assistance to Indigenous communities and remote communities in preparing their houses/family/visitors for extreme heat events.
    - SES and other agencies/insurance council/business representatives jointly develop and communicate with and educate the community and business about vulnerabilities and the need for insurance, business continuity plans and business recovery plans. Engage business associations, industry representatives and community groups to promote regular reviews of insurance cover and type, and the need to update business continuity plans and/or business recovery plans.
    - By 2018, a whole of Government (SEMC) lifeline study that evaluates essential service vulnerabilities, redundancies and interdependencies providing an awareness of the risks and communicate these to all levels of Government/Business.
    - Engage with local governments to have standard clauses for risk assessments inserted into lease agreements or approvals for events held on council land.
    - Examine the potential for the use of an annual heatwave planning guide (based on the LGA Extreme Heat Guide or the Victorian "Heatwave Planning Guide for Development of heatwave plans in local councils in Victoria or similar guides") and publication of results. This could be a State or local government initiative.

- Installing water fountains/misting stations/cooling packs given out throughout the populated parts of the zone.
- Providing information to travellers about what actions to take and how to prepare for an extreme heat event.

5.4 Animal and Plant Disease

5.4.1 In 2013, the Animal and Plant Disease Hazard Leader (the Department of Primary Industries and Regions SA, undertook a number of risk assessments for the Animal and Plant Disease Hazard in South Australia using the National Emergency Risk Assessment Guidelines.

5.4.2 The risk assessments were prepared and conducted by PIRSA and SAFECOM in 2013.

5.4.3 The objective of the process was to assess the risks to the State from animal or plant disease outbreaks in order to prioritise the State's emergency management efforts through prevention, preparedness, response and recovery activities for the hazard.

5.4.4 Two scenarios were considered for each disease, one medium and one large as experts consider the consequences will never be minor, due to economic impacts. Three specific diseases were chosen as representative of the Animal and Plant Disease Hazard (Foot and Mouth Disease, Karnal Bunt Disease and Pacific Oyster Mortality Syndrome). Experts determined that these diseases would have the most severe impact on South Australia in their relevant sectors.

5.4.5 Stakeholders participating in the risk assessments included personnel from; emergency management, industry and State and Commonwealth Government sectors.

5.4.6 At the Foot and Mouth Disease Workshops, risk analysis results showed that prevention, preparedness and response measures were considered robust and that recovery could be strengthened with some refinements. However for Karnal Bunt and POMS further measures were identified for improvement across prevention, preparedness, response and recovery phases.

5.4.7 The Animal and Plant Disease Hazard Leader has progressed work on the outcomes of the three risk assessments through the following actions:

- A combined forum across animal and plant industries on planning for recovery from a Biosecurity incident
- Presentations to ZEMCs that have identified Animal or Plant Hazards within their Zone
- A series of reports developed for distribution to relevant stakeholders
- Update the Animal and Plant Disease Hazard Plan
- Evaluation and implementation of the new treatments identified

5.5 Earthquake

5.5.1 Once the priority hazards as identified by the E&W ZEMC were assessed, the rest of the relevant state hazards were considered for risk assessments. The earthquake hazard leader, Department for Planning and Transport advised that a risk assessment and treatment workshop would provide the assurance needed for the earthquake hazard to the zone.

5.5.2 The risks from an earthquake to the Eyre and Western Zone include impacts to the people, economy, infrastructure, public administration, social setting and the environment. Earthquake events considered were 1 in 1,000 year and 1 in 10,000 year events.

5.5.3 As per the Risk Frontiers report (see the Eyre and Western Earthquake Risk Assessment report for further information), the first scenario (1 in 1,000 year event) was based on April 2010 magnitude 5.0 Richter at Kalgoorlie which resulted in a few minor injuries, widespread damage to pre-WW1 unreinforced masonry buildings, loss of chimneys, gables and parapets along with extensive cracking of walls. More modern masonry buildings experienced minor wall cracking, cornice damage and movement between the roof and internal walls. Severe structural damage including ceiling collapse at Boulder Primary School, Boulder Police Station, Boulder War Museum, former Commonwealth Bank and local hotels damaged. Minor damage to four Kalgoorlie Primary Schools. Kalgoorlie Hospital patients and staff evacuated for ½ hour, minor damage to walls. No damage to brick veneer or timber clad & framed structures. The second scenario (1 in 10,000 year event) was based on 1989 magnitude 5.5 Richter earthquakes in Newcastle. The impacts were 13

fatalities, over 150 serious injuries, 300 building demolitions, 35,000 homes damaged, 3000 commercial buildings damaged, 300 - 400 persons requiring temporary accommodation, 14,000 enquiries to the Recovery Centre, $862 million in insured losses, $4.5 Billion total estimated losses. (1990), the Royal Newcastle Hospital was evacuated due to structural damage, two other hospitals were also damaged, the City Fire Station and Ambulance Office were damaged, 147 schools damaged, 42 unfit for occupation, over 5000 structural assessments were undertaken. The damage was extensive; this was due to a combination of an underlying thin layer of alluvium (loose sand and silt deposited by water) which appears to have magnified ground shaking and a high number of vulnerable buildings. Reported infrastructure effects were disruption to telephone service, 10cm crack appeared in bridge on main road going north out of town, all traffic lights failed, essential services experienced minimal disruption but it was noted that many services were on the verge of serious disruption.

5.5.4 Analysis of risks using the NERAG risk criteria found that the top ten risks for the zone all related to either financial loss to the economy, serious injury/death to people or damage/disruption to infrastructure. The economy was found to be at high risk of negative impact due to damage to residential buildings that are underinsured or non-insurance and a medium risk of negative impact due to damage to buildings, storages, equipment or crops in the agriculture and forestry sectors. The loss of life or serious injury to people was found to be a medium risk due to damage to commercial and industrial buildings, education buildings and residential buildings and their contents. The damage/disruption to infrastructure causing failure of service delivery were to mobile phone communications, Moomba to Adelaide gas pipeline, waste water drainage and aerodromes and airstrips.

5.5.4 The recommended actions to mitigate the top risks include:

The recommended actions for Local Government to mitigate their top earthquake risks are:

- Review business continuity plans and exercise them.
- Assist in development of the Zone Emergency Management Plan.
- Participate in relevant emergency management exercises.
- Ensure Building and Environmental Health Officers from different councils can work across council boundaries to help overcome capacity issues in a post disaster environment.

The controls prioritised for improvement in order to mitigate earthquake risks in the zone are:

- Increased promotion of business continuity planning to private businesses with supporting information to assist in plan development.
- Create and promote an all hazards education campaign to increase the resilience of the community to disasters. This could be in the form of a significantly expanded Australian Redcross “RediPlan” program.
- Ensure undergraduate structural engineering courses include earthquake engineering, masonry engineering and quality assurance in their syllabus.
- Implement the Land Use Planning and Building Codes SA Capability and Investment Plan including the adding of hazard information to the Planning Policy Library.
- Ensure trade courses consider basic structural engineering aspects and the earthquake code.
- Ensure undergraduate architectural courses include earthquake engineering design requirements in their syllabus.
- Complete the ZEMC Plan.
- Hold earthquake exercises.
- Significantly expand promotion of the “Drop, Cover, Hold” safety action to the community.
- Inclusion of earthquake evacuation training (including “Drop, Cover, Hold”) as part of fire warden training and holding of earthquake evacuation drills.

Risk treatments prioritised for further investigation and possible implementation were:

- Consider how a major post disaster demolition and infrastructure rebuild program might be implemented.
- Emergency and Functional Services develop Standard Operating Procedures for on-duty and off-duty staff in the event of a major earthquake.
- Promote mitigation research into strategies and techniques to cost effectively mitigate earthquake damage.
- Obtain from the Insurance Council information on insurance coverage in South Australia and the ability of insurers to provide timely and consistent assessments and repairs.

- Determine how best to identify and record the location of vulnerable persons in the community so as to provide additional checks and where necessary assistance to them following a disaster.
- Urban Search and Rescue Category 1 awareness training be developed and rolled out across all emergency services.
- Improve our knowledge of liquefaction risk in the zone through investigation, mapping and publishing of results.
- A lifelines study to examine vulnerabilities and interdependencies of essential services in the zone with a view to retrofitting critical systems where necessary.
- Review the adequacy of existing mutual aid agreements.
- Prepare a mental health annex to the state's Mass Casualty Plan to address community wide information aimed at addressing depression and mental health issues following a disaster with advice on how to overcome problems and where to seek help if needed.

5.5.1 Flow on effects from an earthquake event in the zone would result in longer recovery periods for the community as significant earthquakes are not common in the zone.

5.6 Human Disease

5.6.1 Once the priority hazards as identified by the E&W ZEMC were assessed, the rest of the relevant state hazards were considered for risk assessments. The Human Disease Hazard Leader, Health SA advised that the Pandemic Influenza (PI) state risk assessment and treatment workshop conducted for South Australia would provide the assurance needed for the Human Disease hazard to the zone and Health SA delivered a presentation to the ZEMC based on the findings from the State risk assessment workshops to the committee.

5.6.2 PI holds a global and national impact to people, social settings, environment and in turn public administration, infrastructure and the economy. It is relevant as a whole of State assessment as a pandemic will have an effect on the entire state and/or nation, and although some areas may have a higher infection rate it will not be contained in a local area and the response would not differ.

5.6.3 Pandemics considered were a 1 in 100 year event based on the 2009 Swine Flu and a 1 in 1,000 year event based on the 1918 Swine Flu. These historic events allowed the scenarios to be based on knowledge and research for assumed accuracy.

5.6.4 The greatest risks identified specific to the State of South Australia were:

- the potential to overwhelm the health care systems leading to an increase in moral and ethical decision making due to limited equipment and medications
- social distancing and reduction of mass gatherings leading to the perception of reduced access to daily services such as food, shopping, petrol and banking
- a reduction in workforce creating economic downturn and economic stress within the community

5.6.5 Analysis of risks using the NERAG process risk criteria found that the current controls in place for Pandemic Influenza would ensure that in a 1 in 100 year event the State of South Australia would be able to run and operate at a reduced capacity under current measures.

5.6.6 It was the processes and controls around the 1 in 1,000 year scenario that were identified and required review. However it was acknowledged that although the occurrence of this scenario is possible, the chance of it developing to the height of its severity in 1918 would be very rare due to implementation of modern day controls.

5.6.7 Recommendations focused on the vast number and variety of already existing controls rather than new treatment options suggesting that a concentration in improving exiting controls would serve a greater purpose.

5.6.8 Viewed as potentially the controls that could hold the highest positive effect during a PI event were:

- Mandated Business Continuity Plans (BCP) with loss of workforce considerations
- Robust links with Private Hospitals

6 Recovery Plan

6.1 About the Eyre and Western Zone Recovery Operations Plan

6.1.1 The Eyre and Western Zone Recovery Operations Plan outlines the responsibilities, authorities and the mechanisms to recover from emergencies within the Zone. This plan aligns with recovery arrangements in the State Emergency Management Plan (SEMP).

6.1.2 The plan does not assume a particular incident or event, and is based on the all-hazards principles as endorsed by the Emergency Management Council.

6.1.3 The Eyre and Western Zone Recovery Planner is responsible for preparing and updating the recovery operations plan in concert with the State Recovery Office and in consultation with Zone Emergency Management Committee.

6.1.4 The Zone Recovery Operations Plan will be available from Govdex.

6.2 Scope of Recovery Operations

Recovery is defined in the SEMP as "The conduct of human, economic and environmental measures necessary to re-establish the normal pattern of life of individuals, families and communities affected by an emergency, including:

a) the restoration of essential facilities and services;
b) the restoration of other facilities, services and social networks necessary for the normal functioning of a community;
c) the provision of material and personal needs;
d) the provision of means of emotional support;
e) the recovery of the natural environment; and
f) support to assist the recovery of business"

6.2.1 Recovery can be described as a developmental process that commences with first response, may last for weeks and potentially extends to months or years after an emergency as communities adapt to a new state of normality.

6.2.2 Recovery starts while response activities are in progress, relying on the systems, information and directions established by response agencies. Recovery efforts tend to gain momentum as the response phase nears completion and become the dominant emergency management activity (Figure 4).

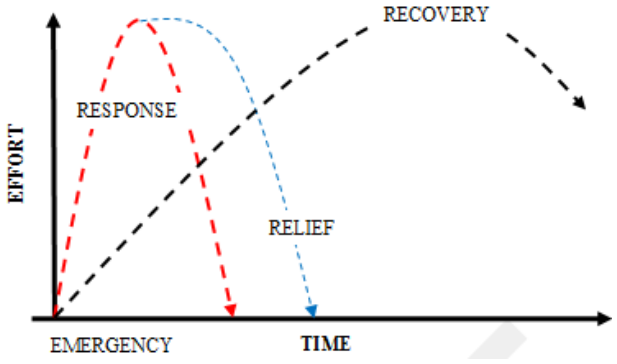


Figure 4 - Emergency Operations Model

For official use only

6.2.3 Immediate relief services that provide essential support to disaster affected communities are activated during response.

6.2.4 All planning and implementation of recovery is underpinned by the National Disaster Recovery Principles.

6.2.5 Recovery operations need to address the core values of an affected community, commonly described as the four components or environments:

- psychosocial (people, families and communities)
- infrastructure (built assets, homes, lifelines etc.)
- economy (employers, investments, trade etc.)
- environment (natural, historic, cultural etc.)

6.3 Legal/Administrative Framework

6.3.1 Recovery planning occurs at a range of levels, including:

- State, involving the State Recovery Committee (formal)
- Regional, involving the Zone Emergency Management Committee (formal)
- Local, involving a local government area, community or facility (informal).

6.3.2 The State Emergency Management Committee has established the State Recovery Committee to provide advice in relation to recovery planning and operations. Membership includes representatives from a range of state government departments, local government and non-government organisations.

6.3.3 The State Recovery Office, within DCSI, works across government and the non-government sector to increase the State's disaster recovery capability. It provides executive support to the State Recovery Committee and assists the Assistant State Coordinator - Recovery in the provision of advice to the Government, State Committees and Zones.

6.3.4 The State Recovery Office assists the Zone Recovery Planner and the Zone Emergency Management Committee to develop the Zone Recovery Operations Plan to ensure a consistent state-wide approach to recovery planning.

• The Zone Emergency Management Committee has responsibility for providing assurance that arrangements are in place to prevent/ and or mitigate, prepare for, respond to and recover from emergencies.

6.3.5 Local government is recognised as a leader within local communities and for the services and information provided to residents and ratepayers. Local government is represented on the Zone Emergency Management Committee and can add significant value to recovery planning.

6.4 Recovery Operations

6.4.1 The framework of roles, responsibilities and accountabilities established for managing the recovery from an emergency ensures the inclusion of community; the coordination of effort; the connection with appropriate authority; and effective action.

6.4.2 Following an emergency, the State Recovery Committee takes an operational role, a Local Recovery Coordinator may be appointed/designated and a Local Recovery Committee should be established. The actual structure for recovery management and coordination may vary according to the scale and nature of the event and the impacts on the community.

6.4.3 In addition to the planning and preparedness responsibilities described above, key operational roles in recovery include:

- Duty Minister
- State Coordinator
- Assistant State Coordinator – Recovery / Chair, State Recovery Committee
- State Recovery Committee – operational
- State Recovery Office
- Control Agency
- Functional Services
- Local Recovery Coordinator
- Recovery Management Team

- Local Recovery Committee

These roles are described in the Zone Recovery Operations Plan.

6.4.4 The Zone Recovery Operations Plan also describes the following aspects of recovery operations:

- Activation
- Ensuring transition from Response to Recovery
- Impact assessment
- Assistance to the affected community
- Local Recovery Action Plan
- Communication
- Public Information
- VIP management
- Media management
- Additional resources
- Natural Disaster Relief and Recovery Arrangements (NDRRA)
- Enabling community recovery capacity
- Community reference groups
- Spontaneous volunteers
- Emergent groups
- Donated goods and appeals
- Community development
- Scale back of Recovery
- Debrief and review.

6.4.5 The ZEMC through its Council members are encouraged to ensure that Mayors and Elected Members are aware that there are pre-arranged roles and responsibilities for the management of many aspects of recovery and that these must be considered before taking action if recovery is to be effective and coordinated. Community leaders should always encourage the public to donate money in preference to goods and to register if they want to volunteer to help.

7 Exercises and Reviews

7.1 Emergency Management Exercises

7.1.1 Exercises are essential to ensure that plans are workable and effective. The Eyre and Western ZEMC will ensure that two ZEC Exercises are held per annum, and other exercises as deemed necessary by the committee. If a major emergency event occurs, the operational debrief may take the place of an exercise. The Eyre and Western ZEMC will ensure outcomes from emergency management exercises are incorporated into strategic Zone emergency management planning activities and documentation.

7.1.2 The Central Exercise Writing Team (CEWT) coordinates emergency management exercises. The Eyre and Western ZEMC is able to seek support from CEWT in writing and conducting exercises.

7.2 Review of Incidents by the Zone Emergency Management Committee

7.2.1 Following a significant incident in the Zone, the Eyre and Western ZEMC will review any lessons identified and consider any required additional risk assessments. The ZEMC also will ensure outcomes from emergency management incidents are incorporated into strategic Zone emergency and risk management planning activities and documentation.

8 Glossary & Abbreviations

8.1 Glossary of Terms

Biota	All of the organisms at a particular locality.
Community	A group of people with a commonality of association and generally defined by location, shared experience or function.
Comprehensive Approach	The Comprehensive approach includes activities across the full prevention, preparedness, response and recovery (PPRR) spectrum.
Control	The overall direction of emergency management activities in an emergency situation. Authority for control carries with it the responsibility for tasking and coordinating other organisations in accordance with the needs of the situation.
Control Agency	The agency that shall exercise control over the emergency response for specific emergency incidents as per the Emergency Management Act.
Coordination	The bringing together of organisations and elements to ensure effective response and recovery operations
Economy	NERAG category – Relates to the economic impact of the emergency on the governing body as reported in the annual operating statement for the relevant jurisdiction, and industry sectors as defined by the Australian Bureau of Statistics.
Emergency	An event that causes or threatens to cause: o the death of, or injury or other damage to the health of, any person; or o the destruction of, or damage to, any property; or o the disruption to essential services or to services usually enjoyed by the community; or o harm to the environment, or to flora or fauna.
Emergency Management	A range of measures to manage risks to communities and the environment. It involves the development and maintenance of arrangements to prevent or mitigate, prepare for, respond to, and recover from emergencies and disasters.
Emergency Risk Assessment	The process used to determine emergency risk management priorities by evaluating and comparing the level of risk against predetermined standard, target risk levels or other criteria.
Emergency Risk Management	A systematic process that produces a range of measures that contributes to the wellbeing of communities and the environment. The process considers the likely impacts of hazardous events and the treatment measures by which they can be reduced.
Environment	NERAG category – Relates to the impacts of the emergency and its effects on the ecosystem of the area, including fauna and flora.
Functional Services	A grouping of participating agencies coordinated by a lead agency that performs a functional role as part of the State Emergency Centre arrangements to support response and recovery operations for an emergency.

8.1 Glossary of Terms

Hazard	Source of potential harm.
Hazard Leader	The Agency which, because of its legislative responsibility or specialised knowledge, expertise and resources undertakes a leadership role for planning emergency management activities pertaining to the prevention of, preparedness for, response to and recovery from a specific hazard. The role has the responsibility to lead and oversee a multi-agency approach to planning for the identified hazard.
Infrastructure	NERAG category – Relates to the impacts of the emergency on the area's infrastructure/lifelines/utilities and its ability to service the community.
Mitigation	Measures taken in advance of, during or after, a disaster aimed at decreasing or eliminating its impact on society and environment.
People	NERAG category – Relates to the direct impacts of the emergency on the physical health of people/individuals and emergency services (i.e. health system) ability to manage.
Preparedness	Arrangements to ensure that, should an emergency occur, all those resources and services which are needed to cope with the effects can be efficiently mobilised and deployed.
Prevention	Regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated.
Public Administration	NERAG category – Relates to the impacts of the emergency on the governing body's ability to govern.
Recovery	Any measures taken during or after an emergency to assist the re-establishment of the normal pattern of life of individuals, families and communities affected by the emergency and includes: a) the restoration of essential facilities and services; and b) the restoration of other facilities and services necessary for the normal functioning of a community; and c) the provision of material and personal needs; and d) the provision of means of emotional support;
Relief	The provision of immediate shelter, life support and human needs of person affected by, or responding to, an emergency. It includes the establishment, management and provision of services through emergency relief centres.
Response	Any measures taken during an emergency to protect life or property or to otherwise respond to the emergency;
Risk	The effect of uncertainty on objectives. For emergency risk assessments the effect is usually a negative deviation from the expected and is characterised by hazardous events and the likelihoods of particular consequences
Risk Assessment	The overall process of risk identification, risk analysis and risk evaluation.
Risk Management	Coordinated activities to direct and control a community or organisation with regard to risk.
Social Setting	NERAG category – Relates to the impacts of the emergency on society and its social fabric, including its cultural heritage, resilience of the community.
Stakeholders	Those people and organisations that can affect, be affected by, or perceive themselves to be affected by a decision or activity.
State Advisory Groups	Pursuant to Section 11 of the Act, the SEMC has established Advisory Groups to advise the SEMC in relation to disaster mitigation, response and recovery activities. The advisory groups may establish working groups as required.

8.1 Glossary of Terms	
State Emergency Management Committee (SEMC)	The strategic planning committee that reports to the Emergency Management Council on matters that relate to the preparedness of the State against identified hazards or protective security matters.
Support Agency	An agency which provides essential services, personnel or material to support or assist a control agency or affected persons.
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.
Zone Emergency Centre (ZEC)	A support facility within a country Emergency Management Zone where representatives come together to share information and undertake tasks for the Control Agency or other support agencies in support of response and recovery operations.
Zone Emergency Centre Committee (ZECC)	The ZECC is responsible for assisting the ZEMC with: o developing effective engagement with all local response and recovery agencies to support all ZEC activities o preparing and delivering training for all ZEC staff o reviewing and maintaining communication links, activation arrangements, contact lists and training aides o organising, conducting and reviewing ZEC exercises o conducting critical reviews of ZEC operations and other incidents to identify areas of improvement in ZEC capability o ensuring critical resource lists are shared between agencies o reporting on ZEC capability and activities to the ZEMC.
Zone Emergency Management Committee (ZEMC)	The ZEMC is responsible for planning and implementing Zone-level actions in support of the State Emergency Management Plan. The ZEMC will use an all hazards approach across the full PPRR spectrum to conduct emergency risk assessments compliant with the approved risk management process; identify and evaluate risk treatment options and develop Risk Treatment Plans; and develop a Zone Emergency Management Plan, and other plans, as required.

8.2	List of Abbreviations
ABS	Australian Bureau of Statistics
ALARP	As Low As Reasonably Practicable
AS/NZS	Australian Standard/New Zealand Standard
CERM	Council Emergency Risk Management
CEWT	Central Exercise Writing Team
CFS	Country Fire Service
DEWNR	Department of Environment Water and Natural Resources
ISO	International Standards Organisation
MFS	Metropolitan Fire Service
NERAG	National Emergency Risk Assessment Guidelines
PPRR	Prevention, Preparedness, Response and Recovery
SAFECOM	South Australian Fire and Emergency Services Commission
SAPOL	South Australian Police
SEMC	State Emergency Management Committee
SEMP	State Emergency Management Plan
SMAG	State Mitigation Advisory Group
SRAG	State Response Advisory Group
SRC	State Recovery Committee
ZEC	Zone Emergency Centre
ZECC	Zone Emergency Centre Committee
ZEMC	Zone Emergency Management Committee
ZEMP	Zone Emergency Management Plan

Annex A – Zone Context (ZEMC Endorsed)

1. Zone Overview

The Eyre and Western Zone covers an area of more than 230,000 square kilometres comprising eleven local government areas, two remote aboriginal communities and one unincorporated area serviced by the Outback Communities Authority (OCA). The following local government areas are represented in the Eyre and Western Zone:

- City of Port Lincoln
- City of Whyalla
- District Council of Ceduna
- District Council of Cleve
- District Council of Elliston
- District Council of Franklin Harbour
- District Council of Kimba
- District Council of Lower Eyre Peninsula
- District Council of Streaky Bay
- District Council of Tumby Bay
- District Council of Wudinna

Unincorporated areas:

- Unincorporated West Coast

Aboriginal Communities

- Oak Valley on the Maralinga Tjarutja Lands – located 516 kilometres northwest of Ceduna – has a local population of 80 to 100.
- Koonibba near Ceduna is located 43 kilometres northwest of Ceduna and its population varies from 120 to 200.
- Yalata Aboriginal Reserve in the far west – situated on the Eyre Highway about 200 kilometres west of Ceduna. It is home to a transient population of between 150 and 200 people on Aboriginal Lands Trust leasehold land.

1.1 Council Finances[3]

1.1.1 Figure 5 shows the total rates revenue received by Councils in 2010/11 classified by type of customer i.e., residential, commercial, industrial, rural and other. Residential and rural rates are the primary source of revenue for councils representing 85 per cent of total revenue.

1.1.2 LGAs of Kimba, Wudinna and Franklin Harbour derive a relatively small income from residential rates; instead they derive a greater share of income from rural properties. These three council areas are expected to experience an increase in population in response to new mines going ahead in the region which will contribute to residential rates revenue but also increase the demands on councils. It is estimated that the existing housing stock in both Kimba and Wudinna will not be sufficient to handle population increase even though both regions have been in long term population decline. Once existing housing stock has been filled then construction of new houses along with physical infrastructure such as roads, footpaths etc. will be required.

1.1.3 High population growth areas such as Streaky Bay and other beach-side councils have a more "even rate base" from the growth in residential population, including for retirement, and a rural rate base.

[3] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

Rates revenue by Local Government area 2010/11

LGA Name	Total residential rates 2010 ($)	Total Commercial Rates 2010 ($)	Total Industrial Rates 2010 ($)	Total Rural Rates 2010 ($)	Total Other Rates 2010 ($)	Total ($)
Tumby Bay	903,000	67,000	24,000	1,385,000	0	2,379,000
Wudinna	198,000	60,000	6,000	832,000	14,000	1,110,000
Elliston	528,000	70,000	8,000	749,000	161,000	1,516,000
Streaky Bay	1,003,000	111,000	125,000	821,000	2,000	2,062,000
Kimba	316,000	33,000	0	716,000	0	1,065,000
Cleve	454,000	55,000	88,000	1,202,000	0	1,799,000
Franklin Harbour	166,000	52,000	0	592,000	85,000	895,000
Lower Eyre Peninsula	1,739,000	0	0	1,747,000	0	3,486,000
Ceduna	1,883,000	0	211,000	710,000	35,000	2,839,000
Eyre Peninsula excl. Port Lincoln and Whyalla	**7,190,000**	**448,000**	**462,000**	**8,754,000**	**297,000**	17,151,000
Port Lincoln	5,333,000	1,098,000	293,000	73,000	483,000	7,280,000
Whyalla	9,789,000	1,385,000	918,000	106,000	105,000	12,303,000
Eyre Peninsula incl. Port Lincoln and Whyalla	22,312,000	2,931,000	1,673,000	8,933,000	885,000	36,734,000

Source: Local Grants Commission of South Australia.

Figure 5: Rates revenue by Local Government area 2010/11

1.1.4 Figure 6 illustrates the rural nature of much of Eyre Peninsula and property type by local government area.

Property type by Local Government Area 2010/11

LGA Name	Residential properties	Commercial properties	Industrial properties	Rural properties	Other properties	Total
Tumby Bay	1,062	70	3	713	128	1,976
Wudinna	357	67	2	494	46	966
Elliston	459	53	2	427	46	987
Streaky Bay	857	79	5	649	63	1,653
Kimba	325	55	0	411	23	814
Cleve	632	82	1	551	36	1,302
Franklin Harbour	588	34	2	295	49	968
Lower Eyre Peninsula	1,692	93	6	929	85	2,805
Ceduna	1,235	143	7	421	85	1,891
Eyre Peninsula excl. Port Lincoln and Whyalla	**7,207**	**676**	**28**	**4,890**	**561**	13,362
Port Lincoln	6,212	733	58	34	607	7,644
Whyalla	10,555	608	37	42	221	11,463
Eyre Peninsula incl. Port Lincoln and Whyalla	**23,974**	**2,017**	**123**	**4,966**	**1,389**	32,469

Source: Local Grants Commission of South Australia.

Figure 6: Property type by Local Government area 2010/11

1.2 City of Port Lincoln

1.2.1 Port Lincoln, the "Seafood Capital of Australia".

1.2.2 With its population of 14,000, Port Lincoln is a major commercial centre for the Eyre Peninsula and a popular destination for visitors. Not only a beautiful township overlooking Boston Bay. Port Lincoln makes an ideal base from where to explore the coast and hinterland of the Lower Eyre Peninsula. The shopping is extensive, offering everything from supermarkets and department stores to a myriad of specialty stores. Galleries and quality art and craft outlets with local products and souvenirs will add to your holiday experience

1.2.3 Port Lincoln is one of the state's most popular locations for visitors to drop a line. There are many species and facilities available to cater for the keen fisherperson.

1.2.4 Port Lincoln has proximity to 60,000 hectares of National Parks; home to a myriad of flora and fauna to see. Also 250 species of birds have been recorded in the area.

1.2.5 Due to the insulating effect of the surrounding ocean waters, Port Lincoln experiences a delightful Mediterranean climate, which is on average a degree or two warmer than Adelaide in winter and 3o - 5o cooler than Adelaide during the hot summer months. Port Lincoln's average rainfall is 488mm or 19 inches, which falls mainly during the winter months.

1.2.6 Warm summers, mild winters and balmy weather during autumn and spring, make Port Lincoln an all year destination for touring, fishing, sailing and other recreational pursuits.

1.2.7 Port Lincoln is perhaps the nation's biggest combined agricultural and fishing centre.

1.2.8 Port Lincoln's primary industries include the production of lambs, wool and beef, Cereal crops including wheat, oats, barley, canola, lupins etc. Tuna, prawns, lobster, abalone and scale fish are the major fishing and aquaculture industries.

1.3 City of Whyalla

1.3.1 It is located on the western shore of upper Spencer Gulf, around 394kms northwest of Adelaide by road and 240kms by air, averages 300 days of sunshine every year and has an annual rainfall around 270mms.

1.3.2 Whyalla is often referred to as the "Education City." Facilities include Whyalla campuses of the University of SA and TAFE SA, public and private primary and secondary schools, and a special school for students with intellectual disabilities. It is a resilient community of around 70 different nationalities. It is a city of wide open spaces, quality sporting grounds and approximately 50 neighbourhood parks and reserves. The Corporation of the City of Whyalla, generally referred to more simply as Whyalla City Council or even just Whyalla Council, was established in 1970 when it replaced the Whyalla Town Commission. This was an unusual form of local government comprising both elected and appointed representatives of the community and BHP. Its urban boundaries comprise 41.5 square km within a total local government area of approximately 1,000 square km. Whyalla Council has one of the most diverse operations of any local government. It operates an airport, two public libraries, child care centre, cemetery and crematorium, visitor information centre, maritime museum, lighthouse, waste landfill site, marina and boat ramps.

1.3.3 Whyalla's major industries include OneSteel Whyalla Steelworks producing a range of steel products including rail line and steel sleepers, Santos producing crude oil and LPG, industrial fabrication companies, national contractors to heavy and engineering industries, commercial salt production, Cognis Australia producing natural beta-carotene for the food and vitamin industries (used as pro-vitamin A and colouring for foodstuff s such as margarine, cheese, sauce and soft drinks), aquaculture, tourism and major events.

1.3.4 In August 2010, plans were announced for a $30million proposed re-development of the Westland Shopping Centre (with work expected to commence in 2011/2012). The following month a major mineral earth mining company, Arafura Resources, announced that it would establish a processing plant at Whyalla as part of a $1billion project (with a preliminary goal of having the plant completed in 2013.) At a social and community level, Whyalla has an extensive range of active and committed community groups with hundreds of proud volunteers working for the betterment of the city and their fellow residents.

1.4 District Council of Ceduna

1.4.1 Ceduna is the major centre to a large and diverse business and industry sector on the Far West Coast of Eyre Peninsula, South Australia. It is the established.

1.4.2 The Eyre Highway or National Highway One passes directly through Ceduna with approximately 240,000 tourists passing through the town annually (Centre of Economic Studies 2001).

1.4.3 The District Council of Ceduna is the most western Local Government area of South Australia, being one of the most isolated and remote Councils of the State and is located 780km by road from South Australia's capital Adelaide.

1.4.4 The town of Ceduna is located on the Far West Coast of South Australia, on the scenic shores of Murat Bay on the Great Australian Bight, 780 km by road from South Australia's capital Adelaide and 1900 road km to Perth.

1.4.5 A high level of economic growth has occurred in recent times through the tourism, aquaculture and mining industries. This has resulted in the demand for increased services, increased interest in land development and the creation of many new job opportunities.

1.4.6 Ceduna has a population of 3,797 people as at 2008 (ABS). A high proportion of this number of people lives in Ceduna/Thevenard with the towns of Koonibba, Smoky Bay and Denial Bay having smaller populations within the Council's boundary.

1.4.7 Ceduna has the highest percentage of Aboriginal people of all local government areas in South Australia, with the population currently standing at 25.5% of the population. This is one of the highest percentages in Australia and perhaps for a locality that includes a medium sized town (Nicholas Clarke & Associates May 1996). A number of Aboriginal communities in adjacent unincorporated areas rely on the available services in Ceduna and therefore, use the town as a base for a variety of reasons. These outlying communities should be considered a part of the Ceduna community.

1.4.8 Ceduna has been described as having one of the most complex multi-cultural communities in the country (Nicholas Clarke & Associates May 1996) with many nationalities prominent in the town and immediate region.

1.4.9 Ceduna's reputation as the Far West Coast's major business, industry and service centre is expected to be enhanced with the continued redevelopment of major infrastructure in and around Ceduna.

1.5 District Council of Cleve

1.5.1 The District Council of Cleve is situated on the Eyre Peninsula of South Australia, between Whyalla and Port Lincoln, and is characterised by panoramic views, cereal crops, sandy beaches and some of the best fishing in Australia. The district extends from the coast at Arno Bay west to the mountain ranges of Darke Peak.

1.5.2 The districts prosperity has been largely attributed to the diverse farming activities based on cereal grains, oilseeds and pulses as well as livestock. The agricultural sector is a major employer within the district with bulk grain handling facilities in several towns.

1.5.3 Aquaculture is a fast emerging industry at Arno Bay, boasting the first on land hatchery for Southern Blue Fin Tuna in the world.

1.5.4 The Eyre Peninsula is currently experiencing a mining exploration boom with opportunities for the district in extraction of iron ore, dolomite, nickel and uranium.

1.5.5 Generous areas of foreshore reserve with sandy beaches and safe swimming exist at Arno Bay along with a jetty and excellent boat launching facilities. Arno Bay provides arguably some of the best recreational fishing of target species, King George Whiting and Snapper, in Australia.

1.5.6 The district covers an area of 480,000 hectares, serving a population of approximately 1,900 people. Population trends indicate a static population however the Arno Waters marina development and emergence of the mining industry has the potential to drive strong growth of the next decade.

1.6 District Council of Elliston

1.6.1 The District Council of Elliston was formed under the District Council's Act 1887, and comprised of 'the whole of the county of Musgrave and portion of the Council of Robinson, south of a true line east from the northern point of Venus Bay to the east boundary of the said country'.

1.6.2 This represented an area of 585,000 hectares on the western seaboard of the Eyre Peninsula, South Australia. Boundary alterations in 1989 effected the acquisition of an additional 80,000 hectares from the eastern adjoining Council. Today the Council covers an area of 665,000 hectares, which includes coastline of approximately 150 km in length.

1.6.3 The economy of the District is based upon primary production and the fishing and tourism industries. Primary production consists of mainly cereal grains (wheat, barley and oats) and wool production. The extensive coastline is productive fishing ground, which is consequently experiencing patronage in recreational fishing and tourism.

1.6.4 The District has a population of approximately 1,132 persons and contains 1,262 rateable assessments represented by 880 voters. The main townships within the District are Elliston, Lock, Port Kenny and Venus Bay.

1.6.5 Council fulfils its responsibilities through an elected body of eight Councillors under the leadership of the Chairman. Council is the policy making body responsible for managing the affairs and making decisions of Local Government for the District Council of Elliston. The District Council of Robe is located approximately 339kms from Adelaide on Guichen Bay. The District is predominately agricultural and includes some viticulture.

1.7 District Council of Franklin Harbour

1.7.1 Cowell is situated on Franklin Harbour approximately halfway between Port Augusta and Port Lincoln, it is an ideal place for visitors to break a long journey or to take a holiday and enjoy the pleasant climate and relaxed life style.

1.7.2 One of the safest and best fishing areas in South Australia, Franklin Harbour is a land-locked bay with a narrow entrance through which boats have access to the harbour's calm waters.

1.7.3 **Suburbs/Towns**

Carpa, Charleston, Coolanie, Cowell, Elbow Hill, Franklin Harbour, Glynn, Hawker, Heggaton, James, Lucky Bay, Mangalo, McGregor, Midurnie, Miltalie, Miltalie North, Minbrie, Mitchellville, Mount Millar, Playford, Port Gibbon, Pondooma, Utera, Warren, Wilton, Yabmana.

1.7.4 **Local Industries**

Rural (wheat, wool), Aquaculture (oysters, fin fish), Fishing and Jade.

1.7.5 **District Area / Population**

- The total area of the district covers 3,283 square kilometres.
- In 2007, the total population of the district was 880 made up of:
- Population aged 0 -14 years - 18.4%

- Population aged 65 years and over – 18.8%
- Median age – 44 years
- Males – 428
- Females - 452

1.8 District Council of Kimba

1.8.1 The District Council of Kimba is located in the North Eastern portion of South Australia's Eyre Peninsula. Strategically located on the Eyre Highway, National Highway One, Kimba is 475 kilometres from Adelaide, 155 kilometres from Port Augusta and 315 kilometres from Ceduna. Neighbouring towns are Cleve (75 km), Kyancutta (90 km) and Whyalla (120 km).

1.8.2 The Kimba area was first opened up for agricultural purposes in 1876, with the township of Kimba being proclaimed in 1915. The township became the centre of the 3,500 square kilometre District Council of Kimba. The population of the district has been gradually declining over recent decades, with the district population currently around 1,211 people. Approximately 650 people reside within the township. Wattle Range Council is located approximately 400kms from Adelaide. The district is predominately agricultural.

1.9 District Council of Lower Eyre Peninsula

1.9.1 The Council encompasses an area of 4,763 square kilometres with 684 km of coastline. The resident population is 4,921 and the Council is responsible for maintaining a road network of 1,316 km of which 135 km is sealed. Council owns and operates the Port Lincoln Airport, which plays a vital role in the transport system serving Eyre Peninsula. The airport catered for 200,000 passengers and 14,800 aircraft movements in 2010/11, supported by competition arising from the introduction of Qantaslink services complimenting the existing Regional Express service. Council owns and operates sixteen aged / handicapped independent living units in Cummins. Council also owns the Coffin Bay Caravan Park and the operation of this facility is leased to independent managers.

1.9.2 The District Council of Lower Eyre Peninsula is largely a rural community, interspaced with small country and coastal towns. The extensive east and west coasts of Council's boundaries provide magnificent fishing and surfing beaches, complimented by breathtaking views of rugged cliffs, idyllic picnic-spots and the beauty of the colour-changing Marble Ranges. The major industries of agriculture, aquaculture, fishing and tourism are recognised as being of primary significance in the State's economy.

1.9.3 The Head Office of Council is in Cummins and the original office in Port Lincoln has been retained as a Branch Office. Works Depots and staff are located in Cummins and at the Port Lincoln Airport. Council has a work force of thirty nine employees and contracts out a number of specialised functions and major projects.

1.9.4 Facilities provided by other organisations in the area include a medical clinic and hospital with hostel accommodation at Cummins, the Cummins Area School providing for students from reception to year 12, a Medical Centre at Coffin Bay, Rural Primary Schools at Lake Wangary and Poonindie and a wide range of sporting facilities throughout the district.

1.10 District Council of Streaky Bay

1.10.1 The Council area includes the townships of Streaky Bay (which is the main service and business centre), Wirrulla, Poochera, Haslam, Sceale Bay, Baird Bay, Eba Anchorage, and Perlubie Landing, covering an area of 6,232 km^2 with a population of over 2,000.

1.10.2 The District is located some 720 kilometres by road from Adelaide on the shores of Blancheport in the Great Australian Bight. It is situated on the West Coast of Eyre Peninsula in South Australia and is surrounded by some of the region's most spectacular and unique coastal attractions and experiences. The Council shares its boundaries with the District Councils of Ceduna in the North West, Elliston in the south and Wudinna in the north east.

1.10.3 The District has three main business industries – Agriculture, Aquaculture and Tourism. Agriculture in the district consists mainly of cropping, sheep and cattle. Silos are evidence of this thriving sector and are spread throughout the district at Witera, Streaky Bay, Wirrulla, Cungena and Poochera. Aquaculture is a growing industry and Streaky Bay's portion of the Seafood & Aquaculture Trail. The Council's district also has 15 operational Oyster Farms in Streaky Bay and Haslam in varying stages of development.

1.10.4 The District has a mild climate with the average temperature being a few degrees above Adelaide's in both summer and winter. The warm summer and mild winter, autumn and spring weather provides a great opportunity for a relaxed outdoor lifestyle.

1.10.5 The District is one of the region's key tourism attractions for touring, surfing and outdoor activities. In excess of 100,000 tourists visit each year. There are numerous attractions surrounding Streaky Bay including Westall

Way Loop, Cape Bauer Tourist Drive, both include Blow Holes, Hallys Beach, Razors, Point Labatt, Murphys Haystacks, Smoothpool, Sceale Bay, Yanerbie Sand dunes and Perlubie Beach. The Gawler Ranges are also in close proximity.

1.10.6 Tourism is increasingly important to the local economy. There are new tourist ventures including accommodation, boat charters, eco-tourism etc. Tourists have a world class experience swimming with the sea lions and dolphins in the wild.

1.10.7 The town hosts a number of local events on an annual basis with the largest being:

- Streaky Bay Thoroughbred Race Meeting
- Perlubie Sports Day
- Bayside Festival
- Golf Open,
- Bowls Whiting Carnival
- New Year's Eve Fire Works.

1.11 District Council of Tumby Bay

1.11.1 The District Council of Tumby Bay is located on Southern Eyre Peninsula and incorporates the districts of Ungarra, Lipson, Port Neill and Tumby Bay. Tumby Bay is the main service centre for the District with smaller towns including Port Neill, Ungarra and Lipson. Other areas include Cockaleechie, Yallunda Flat, Butler, Stokes, Moody, Koppio, Hutchison, Louth and Brooker.

1.11.2 The District Council of Tumby Bay covers an area of 261,590 hectares or 2,615 square kilometres.

1.11.3 The Township of Tumby Bay is an important service centre to the surrounding agricultural community with rural suppliers, insurance agencies, fuel outlets, RAA representative and mechanical suppliers. It is well equipped with a modern hospital, doctor's surgery, school, kindergarten, shopping, sporting and accommodation facilities. It has a motel, two hotels, self-contained holiday units, flats and cabins, beach-front caravan park, backpacker accommodation and numerous take-away/dine in food outlets.

1.11.4 The town of Tumby Bay offers a variety of services with two local supermarkets, hairdressers, Australia Post shop, gift shops, bakery, accommodation and eating facilities.

1.11.5 Tumby Bay and Port Neill have good recreational jetties and community built boat ramps for boating and fishing.

1.11.6 Both towns are serviced by coach from Adelaide and from Port Lincoln where there is an airport with daily flights in and out.

1.11.7 **Population**

The population of Tumby Bay is approximately 1,200 with the population of the District Council of Tumby Bay being 2,658. However during the summer school holidays the population rapidly increases with the tourist influx.

1.11.8 **Climate**

- Summer : December - February - Max 27°C Min 17°C
- Autumn : March - May - Max 22°C Min 12°C
- Winter : June - August - Max 17°C Min 7°C
- Spring : September - November - Max 22°C Min 19°C

1.11.9 **Industry**

The main industry in the district is cereal cropping with the sheep and beef industry also very well represented. Fishing and tourism are industries which are proving important.

1.11.10 **Employment**

Farming, AUSBULK, fishing and teaching are the main employers in the District.

1.12 Wudinna District Council

1.12.1 The Wudinna District Council is located on central Eyre Peninsula, South Australia. It encompasses the townships of Warramboo, Kyancutta, Wudinna, Yaninee and Minnipa. The district's main service centre is Wudinna. Wudinna is located on the Eyre Highway, 693km east of the South Australian/Western Australian border and 580km west of Adelaide.

1.12.2 **District Area**

The total area of the district covers 5,393.8 square kilometres.

1.12.3 **Population**

In 2009 the population of the district was at 1,333 (ABS Statistics).

1.12.4 **Industry**

The District's prime source of income is agriculture related, predominantly cereal cropping. Sheep and beef cattle are also farmed.

Tourism and mining are evolving as potential alternative industries for the area

2. Geography

2.1 Natural Features

2.1.1 Geographically the region has a triangular shape bounded in the north by the Gawler Ranges, the east by Spencer Gulf, the south by the Southern Ocean and the west by the Great Australian Bight. The geographical relief is gentle and low, with most areas less than 150m above sea level. The largest hills are located in the Gawler Ranges with peaks reaching 500m. The Koppio Hills, covering an area of about 100 km², are the most significant topographical feature in the southern part of the region.

2.1.2 The region is rich in environmental assets with long sandy beaches and limestone cliffs along the coast, granite outcrops, agricultural lands and desert communities, mallee and redgum woodlands, and urban and outback environments.

2.1.3 Most of the region is managed by individual landowners, local and State Government agencies, and industries with all contributing to the sustainability of the natural resources. Unique habitat areas have been preserved in parks, reserves and, increasingly, on private landholdings. The competing priorities of the businesses that profit from the region's resources, the community that depends on the resources for their lifestyle, and the agencies managing reserved habitat areas are very evident.

2.1.4 Land use on Eyre Peninsula includes primary production, dense urban centres, commercial and industrial activities and significant areas of native vegetation in undeveloped condition. Land use zones show a predominantly rural area with numerous areas of watershed protection, conservation and coastal zones. The rate of development and land use change is most marked in urban and peri-urban areas and other locations associated with mining developments and defence activities.

2.2 Vegetation

2.2.1 The relative isolation of the Eyre and Western region has resulted in a significant degree of endemism and species diversity. The region has one of the state's highest levels of natural vegetation cover, with about 45% (approximately 2,187,560 hectares (ha)) remaining intact since European settlement, of which 44% is protected. These areas contain important Mallee habitat, several woodland communities, endemic fauna and flora species some of which is rare, threatened or endangered. Vegetation clearance for agricultural purposes ranges from 14% in the far west to 72% in the south. About 15% of the region's grazing area is covered with scattered vegetation.

2.2.2 Major threats to plant communities include continued fragmentation, grazing, salinity, inappropriate fire regimes, and weed infestation.

2.2.3 Biodiversity should be increased with endemic species revegetation and the development of biodiversity corridors that can in turn strengthen the environment's resilience to climate change. Areas of high environmental significance should be protected from the ramifications of development. State and council conservation reserves, marine parks, national parks and heritage agreements areas play an important role in this manner.

2.2.4 The region features unique fresh and saline wetlands, and a long and relatively undeveloped coastline. The coastal and marine environments are part of the region including 254 offshore islands ranging from 179 to 40,000 square metres in size.

2.3 Natural Assets

2.3.1 Eyre Peninsula is a significant ecotone, being the western limit of a range of eastern Australian species and the eastern limit of many western Australian species (DEH 2002). The relative isolation of Eyre Peninsula (by sea and arid lands to the north) has allowed a high degree of endemism and species diversity to develop.

2.3.2 Port Lincoln has the best natural harbour in South Australia. In 1836, Governor Hindmarsh wanted to locate the capital there, but Colonel Light rejected it because of a lack of available water.

2.3.3 Australia's only major deposits of nephrite jade occur in the hills north of Cowell. Since their discovery in 1965 approximately 1000 tonnes have been mined. Jade jewellery and ornaments are fashioned in workshops at Cowell and Adelaide.

2.3.4 **Coastal, estuarine and marine environments** - The region includes the Eucla, Murat, Eyre, Spencer Gulf and Upper Spencer Gulf marine bioregions, which are incorporated in the network of marine parks and are inhabited by diverse marine and coastal biota that include mangrove stands, samphires, saltmarsh communities, the southern right whale and giant Australian cuttlefish spawning congregations. The coastal wetlands are vital nursery grounds for commercially valuable fisheries species, and near-shore waters are important to aquaculture. Areas such as Acraman Creek north of Streaky Bay are wetlands of national importance.

2.4 Matters of National Environment Significance

2.4.1 There are 14 nationally important wetlands in the Zone. A detailed list of these is provided at the end of this plan.

2.4.2 There are 3 threatened ecological communities throughout the Zone. A list is provided at the end of this plan.

2.4.3 There are 1 critically endangered, 13 endangered and 16 vulnerable flora species throughout the Zone (list provided at the end).

2.4.4 There are 3 critically endangered, 8 endangered and 18 vulnerable birds in the Zone; 2 endangered and 1 vulnerable reptile species; 4 endangered and 6 vulnerable mammal species and 1 vulnerable shark species present in the Zone. A detailed list is provided at the end of the zone context.

3 Climate & Weather

3.1.1 Eyre Peninsula enjoys a mild Mediterranean climate – a couple of degrees cooler than Adelaide in the summer, and a degree or two warmer in the winter. Warm days are followed by cool, balmy evenings, with winters usually mild providing a great opportunity for a relaxed outdoor lifestyle.

3.1.2 The Zone is characterised by warm, dry summers and cold, wet winters. The southern areas have a milder, moister climate compared with the warmer and drier north and northwest parts of the region.

3.1.3 Like the land itself, Eyre Peninsula's climate is one of contrasts, from warm and arid in the far west to cool and temperate in the south. The average daily maximum temperature is from 16°C in Port Lincoln to 18°C in Kyancutta during winter and 25°C in Port Lincoln to 32°C in Kyancutta during summer.

3.1.4 Mean annual rainfall ranges from 250mm in the north and northwest to more than 500mm in the south.

Table 4 - Average Temperature

	Summer Max	Summer Min	Autumn Max	Autumn Min	Winter Max	Winter Min	Spring Max	Spring Min
Whyalla	28°C	18°C	23°C	14°C	18°C	8°C	23°C	13°C
Port Lincoln	25°C	16°C	21°C	13°C	16°C	9°C	20°C	11°C
Ceduna	28°C	15°C	24°C	11°C	18°C	6°C	24°C	10°C
Kyancutta	32°C	14°C	25°C	10°C	18°C	5°C	25°C	8°C

Table 5 - Average Rainfall

	Summer	Autumn	Winter	Spring	Annual Ave
Whyalla	20mm	24mm	21mm	24mm	270mm (10.7")
Port Lincoln	16mm	36mm	38mm	73mm	486mm (19.1")
Ceduna	15mm	26mm	24mm	38mm	310mm (12.2")
Kyancutta	17mm	28mm	23mm	42mm	320mm (12.6")

4. Area & Population

4.1 Overview

4.1.1 The Whyalla and Eyre Peninsula region has a population of almost 58,293 people or 3.5% of South Australia's total population. Between June 2010 and June 2013, the population of the Zone increased by 1% or 586 people.

4.1.2 Just over 64% of residents live within local government areas of Whyalla and Port Lincoln. The City of Whyalla is the largest population centre with 22,767 followed by the City of Port Lincoln which has a population of 14,732.

4.1.3 There has been a decline in population in some regional areas in recent decades following reduced employment in the agriculture sector. This has led to a population increase in some coastal towns associated with the development of aquaculture and tourism, and the arrival of people making a lifestyle change. Those that experienced a decline in population are fairly small communities with population numbers of less than 2,000.

4.1.4 The area and population totals for each of the councils in the Eyre and Western Zone as of 2013 are shown in the table below.

Table 6: Area and Population totals of the Eyre and Western Zone (2013)

LOCAL GOVERNMENT AREA	LAND AREA	POPULATION	
	% of Region	No.	% of Region
Whyalla	0.44	**22,767**	39.16
Port Lincoln	0.01	**14,732**	24.98
Ceduna	2.33	**4,331**	6.17
Cleve	1.94	**1,751**	3.07
Elliston	2.79	**1,068**	1.85
Franklin Harbour	1.41	**1,297**	2.26
Kimba	1.71	**1,103**	1.93
Lower Eyre Peninsula	2.05	**5,010**	8.72
Streaky Bay	2.68	**2,245**	3.73
Tumby Bay	1.12	**2,706**	4.58
Wudinna	2.32	**1,283**	2.22
Collective Local Government (11 LGA's)		**55,651**	**98.7**

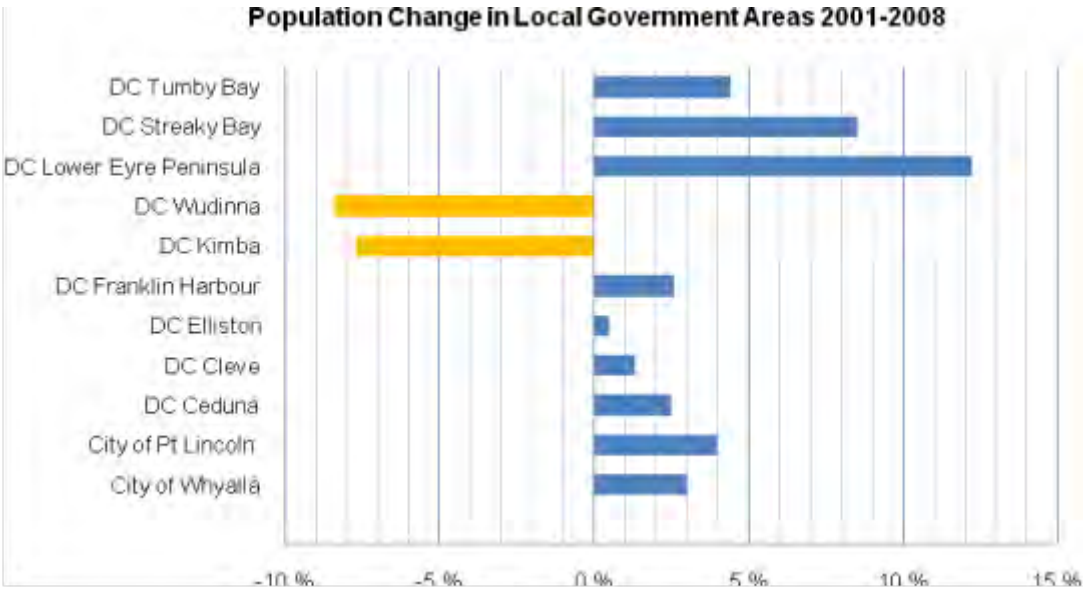


Figure 7 - Projected Population Growth

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4.2 Population Projection

4.2.1 South Australia's population projections indicate that Eyre Peninsula's population is expected to grow through the 2006-2021 period, albeit at a rate lower than the State average. The population in the Zone is forecast to grow by 3,458 people (6%) from 2006 to 2021. By comparison, the South Australian region is projected to grow by 288,548 people or 18.4% over the same period.

4.2.2 In particular, Port Lincoln and the District Councils of Lower Eyre Peninsula and Franklin Harbour show strong projections for future growth, while some other Council areas are projected to experience population decline.

4.2.3 Planning SAs population projection is that the City of Whyalla's population will decline over the next two decades. This projection is based on assumptions about future fertility, mortality and migration. However, contrary to Planning SAs projections it is expected that the population of Whyalla will grow.

4.2.4 In fact, population growth is already occurring in Ceduna and Whyalla, where the positive impact of mining activity is being experienced. Other coastal local government areas including Lower Eyre Peninsula, Streaky Bay, Tumby Bay, Ceduna, Franklin Harbour, Cleve and Elliston are also flourishing with the desire for a sea change lifestyle attracting many people to coastal communities.

Table 7: Past, Current and Future Population Projections[4]

LOCAL GOVERNMENT AREA	2006	2014	2016	2021
Whyalla	22,502	22,983	23,353	23,566
Port Lincoln	14,251	14,863	15,312	15,738
Ceduna	4,231	4,313	4,370	4,408
Cleve	1,973	1,983	1,975	1,962
Elliston	1,180	1,189	1,190	1,187
Franklin Harbour	1,316	1,337	1,355	1,364
Kimba	1,163	1,162	1,153	1,141
Lower Eyre Peninsula	4,611	4,866	5,091	5,299
Streaky Bay	2,095	2,105	2,095	2,079
Tumby Bay	2,644	2,709	2,752	2,791
Wudinna	1,364	1,335	1,299	1,255
Collective Local Government (11 LGA's)	**57,330**	**58,845**	**59,945**	**60,788**

4.2.5 The ongoing expansion and diversification of the region's industry sectors (agriculture, fishing, aquaculture, tourism, mining, processing and manufacturing activity); the increasing demand for education and health services and the emergence of renewable energy initiatives will attract more people to Whyalla and Eyre Peninsula in the future.

4.2.6 Some of the region's inland towns and communities have experienced population loss. The establishment of larger and fewer agricultural properties, a run of poor seasonal conditions, the migration of young people to cities and larger regional centres and the ongoing centralisation of services have all contributed to this decline.

4.2.7 The attraction and retention of population in the region is largely dependent on the economic wellbeing of the mainstay industries of agriculture, manufacturing, fishing, aquaculture, mining and tourism. However, climate variability, increasing costs of production and the global financial crisis have in recent years all severely impacted businesses and communities throughout the region.

4.3 Age Profile

4.3.1 Age distribution for the larger councils in the Eyre Peninsula area - Whyalla and Port Lincoln – follow the same pattern as the state overall. The smaller districts however have a more even distribution across ages. Within the Eyre and Western region the average age of the population has increased over time from an average age of 38 in 2001 to 41 years (2006) and 43 years in 2011 relative to South Australia of 37, 38 and 39 in each of these three years.

4.3.2 The region has above average proportions of school-aged and younger children (0 to 14 years) and young to middle-aged adults (25 to 44 years) compared to the State average and lower proportions of older people aged 65 years and older. However, the smaller council areas on the Eyre Peninsula have a different age structure to that of the State. Children make up a higher proportion of the population in the smaller councils but then from 15 through to age 39 both for males and females there is an outflow most noticeable in the 20-24 age range.

[4] http://workforcewizard.skills.sa.gov.au/default.aspx

The council areas then have higher proportions of middle-aged people. These facts are indicative of young adults moving out of the area, some returning when they are middle-aged and ageing in place.

4.3.3 The age distributions in Port Lincoln and Whyalla are different to other parts of the Eyre Peninsula. Children still make up a higher proportion than that of the State and those aged 15-19 make up higher proportion than that of the State. Men aged 20-34 make up a lower proportion but for women of this age the distribution is more random. Overall, the demographic profile suggest that young people are less likely to move out of the regional cities.[5]

4.3.4 The Whyalla area has above average proportions of children under 15 years and young to middle-aged adults (25-44 years). The population of Whyalla consequently grew by 3% over the period of 2001-2008.

4.3.5 One of the major issues for the future is the possibility of labour shortages due to an ageing population. Population projections based on the core working age population (15 to 64 years) show the working age population of the Eyre and Western Zone will grow by 323 people (0.9%) between 2006 and 2021. Over the same period, the working age population of South Australia is forecast to grow by 123,885 people or 11.9%.

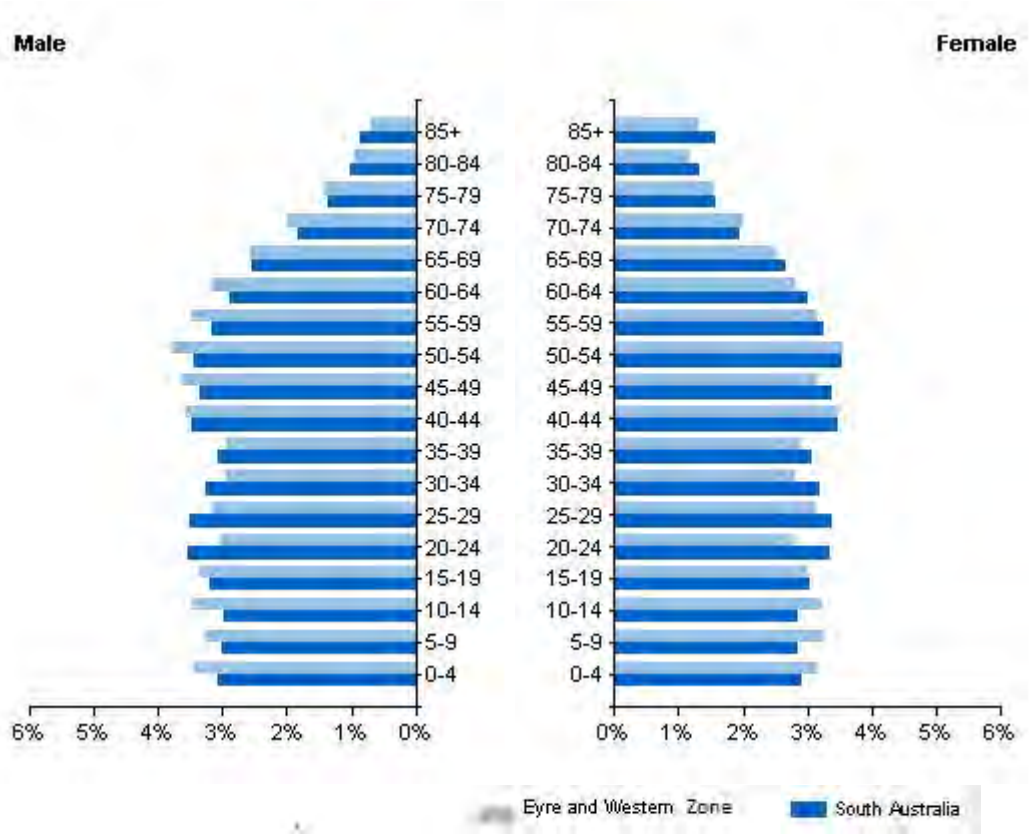


Figure 8- Age Distribution of Population

Source: Australian Bureau of Statistics, Population Census 2013

4.4 Key Population Groups

The Whyalla and Eyre Peninsula region has an above average population of youth. Whyalla has a below average mature age population whilst the wider Eyre region's mature age population is above average. The proportion of people with a disability (i.e. requiring assistance in core activities) is above the State average in Whyalla but below this average in the Eyre region as a whole.

Key Population Groups	Population	% of the region's population
Youth (15-24)	7,145	12.2%
Mature (45-64)	15,010	26.8%

[5] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

Indigenous	3,162	5.6%
Disability	1,197	3.3%

Table 8 – Key Population Groups

Source: Australian Bureau of Statistics, Population Census 2011

4.5 Indigenous Population

4.5.1 The regional population has a higher proportion of aboriginal people when compared to South Australia and Australia and significant indigenous populations are located in Ceduna, Port Lincoln and Whyalla.

4.5.2 The 2006 Census shows that the Whyalla and Eyre region has a significant Indigenous population with 2,784 people or 4.8% of the total population being of Indigenous origin - significantly above the State average of 1.7%. The regional Indigenous populations are concentrated in Ceduna, Port Lincoln and Whyalla. Since the 2001 Census the region's Indigenous population has increased by 17.4%. Ceduna has experienced the greatest growth with a 13.8% increase.

4.5.3 In 2011, there were 3,162 aboriginal people counted in the Eyre and Western Zone representing 5.6% of the total zone's population.

4.5.4 The age profile of aboriginal people in the zone was older than the State with 46.6% of aboriginals being aged 25 years and older compared to 46% for the State.

4.5.5 The aboriginal population of the zone increased by 467 people or (17.3%) between the 2006 and 2011 censuses, while in the South Australia, the aboriginal population increased by 4,878 people (19.1%).

Table 9: Aboriginal age profile of the Eyre and Western Zone as per 2011 Census data

Age	Persons (E&W Zone)	E&W Zone Share (%)	Persons (State)	State Share (%)
0 – 14	1,100	34.8	10,549	34.7
15 -24	589	18.6	5,896	19.4
25 – 44	840	26.6	7,927	26.0
45 – 64	527	16.7	4,801	15.8
65 & Older	106	3.4	1,259	4.1
Total	**1,097**	**100.0**	**30,432**	**100.0**

Source: Department of Further Education, Employment, Science and Technology (http://workforcewizard.skills.sa.gov.au/Default.aspx)

4.6 Cultural Diversity

4.6.1 According to the 2006 census, Australian-born people composed 95.3% of the regional population well above the State average of 74.0%. The cultural diversity of the region is primarily European, with the largest groups being people born in Germany, the Netherlands, and the United Kingdom.

4.6.2 Australian-born people comprise 82.8% of the population in the Eyre and Western Zone, higher than the equivalent group in South Australia, where 73.3% of the population is Australian-born.

4.6.3 In 2011, there were 896 residents in the Eyre and Western Zone who had arrived in Australia in the previous five years (1.6% of the total population). Of those new arrivals, the largest group were from South Africa, with Philippines being the second most common birthplace. The largest groups of recent arrivals in the South Australia region were from India followed by England.

Eyre and Western			South Australia		
Birthplace	**No. of People**	**% of new arrivals**	**Birthplace**	**No. of People**	**% of new arrivals**
South Africa	188	21.0	India	13,249	17.0
Philippines	166	18.5	England	10,266	13.2
England	81	9.0	China (excludes SARs and Taiwan)	9,886	12.7
India	79	8.8	Philippines	3,635	4.7
New Zealand	78	8.7	Malaysia	2,849	3.7
Total (Including all Other Countries)	**896**	**100.0**	**Total (Including all Other Countries)**	**77,988**	**100.0**

Australian Bureau of Statistics, Population Census

Table 10- Recent Arrivals, 2006 to 2011
Source: Australian Bureau of Statistics, Population Census 2011

4.7 Household Composition

4.7.1 At the time of the 2011 Census, compared to South Australia, the Eyre and Western Zone had higher shares of couple families with no children and lone person households and lower shares of couple families with children and one parent families.

4.7.2 The average size of family households in Whyalla and the Eyre Peninsula region consists of two, three and four person dwellings. Non-family households in the region are dominated by one person residences.

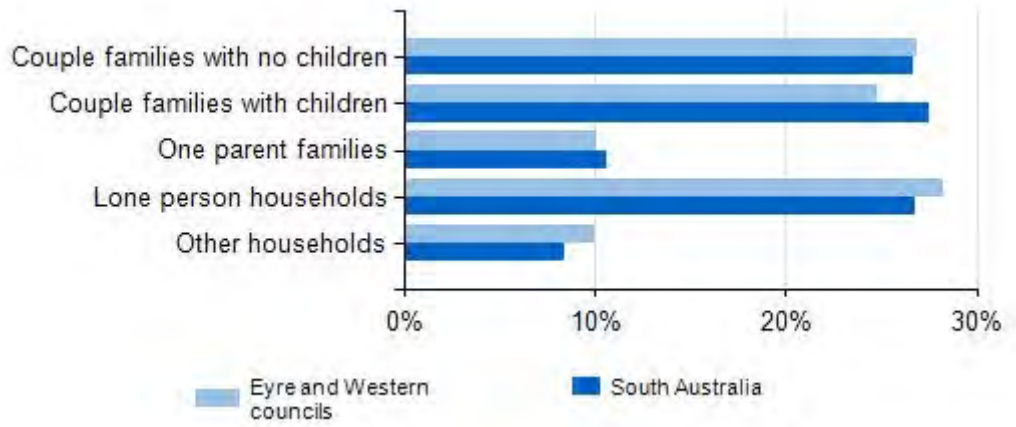


Figure 9 – Families and Households
Source: Australian Bureau of Statistics, Population Census 2011

4.7.3 The vast majority of the region's population reside in traditional separate house dwellings. In Whyalla 56% of residents live in houses but this figure is higher across the region with 79.8% of people living in separate dwellings. Just over 30% of residents in Whyalla live in semi-detached, one storey, townhouse or terrace dwellings, whereas in the wider Eyre Peninsula region only 3.13% of the population reside in this type of accommodation.

WHYALLA EYRE REGION	Dwellings	Persons
Separate house (Eyre)	10,684	27,706
Separate house (Whyalla)	5,021	12,831
Semi-detached, row or terrace house, townhouse etc.- One storey (Eyre)	552	1,087
Semi-detached, row or terrace house, townhouse etc.- One storey (Whyalla)	3,279	6,915
Semi-detached, row or terrace house, townhouse etc.- Two or more storeys (Eyre)	71	184
Semi-detached, row or terrace house, townhouse etc.- Two or more storeys (Whyalla)	17	26
Flat, unit or apartment (Eyre)	779	1,118
Flat, unit or apartment (Whyalla)	296	404
Other dwelling (Eyre)	283	527
Other dwelling (Whyalla)	31	56
TOTAL	21,013	50,854

Table 11 – Dwelling Type
Source: Australian Bureau of Statistics, Population Census 2006

4.8 Disability and Carers

4.8.1 People who require assistance with core activities may have differing needs and challenges to social inclusion and connection within the community.

4.8.2 According to the 2011 census data, there were 1,197 people aged 15 to 64 years in the zone who reported that they need assistance with self-care, mobility or communication because of a disability or long-term health condition. This represents 3.3% of the total population in this age group, lower than the State average of 3.1%.

4.8.3 According to the 2011 census data, there were 4,154 people in the same age group about 11.5% who were providing assistance to someone with a disability, lower than the State average of 12.1%.

Table 12: Disability information as per 2011 Census data

2011 Census Data	Population (E&W Zone)	E&W %	Population (State)	State %
Needs assistance with core activities	1,197	3.3	32,587	3.1
Doesn't need assistance with core activities	33,099	91.4	973,336	92.5
Total (including not stated)	36,197	100.0	1,052,090	100.0
Providing care	16,765	11.9	127,112	12.1

Source: Workforce Wizard Region Report (http://workforcewizard.skills.sa.gov.au/default.aspx)

4.9 Employment by top occupations

4.15.1 As counted at the 2011 Population Census, the Eyre and Western Zone had large proportions of residents employed as Managers and Technicians & Trades Workers while the largest occupation groups in the South Australia region were Professionals and Clerical & Administrative Workers.

4.15.2 Between 2006 and 2011, the largest increase in employment in the Eyre and Western Zone occurred in people working as Machinery Operators and Drivers, while the largest decrease occurred in Managers. Over the same time period, the largest increase in employment in the South Australia region occurred in people working as Professionals, while the largest decrease occurred in Labourers.



Figure 11: Employment by Occupation, 2-11 (Source: Workforce Wizard Region Report, (http://workforcewizard.skills.sa.gov.au/default.aspx)

4.10 Labour Force Participation

4.10.1 According to the Department of Education, Employment and Workplace Relations (DEEWR), in the September quarter of 2014, there were 2,109 unemployed people in the Eyre and Western Zone, with an estimated unemployment rate of 7.6% compared to state's average of 6.7% representing 57,800 unemployed people.

4.10.2 There were 25,636 people employed in the Eyre and Western Zone in September 2014, a 1.2% decrease from the previous year. In comparison, the state experienced a decrease in employment of 0.9% representing 7,300 people.

4.10.3 Overall employment in the Eyre and Western Zone increased by 5.6% (1,334 jobs) between 2006 and 2011, while employment in South Australia increased by 7.2% (49,458 jobs).

4.10.4 The region's unemployment rate has fluctuated in recent years. Unemployment in Whyalla has been consistently above the State average and the rate has been lower for the wider Eyre region. The regional average has nevertheless experienced an increase since mid-2007. The unemployment rates vary across local Councils with some areas experiencing higher rates than the State and regional averages.

4.10.5 In the five years between 2006 and 2011, the majority of Eyre Peninsula councils experienced an increase in levels of employment in the mining industry with the exception being Cleve District Council. Whyalla experienced the largest increase in mining employment in the region over the preceding decade with Ceduna (due to Iluka) and Franklin Harbour due to the Iron Duke mine also experiencing significant employment growth. The increase in mining employment in Whyalla is as a result of the development of the Iron Chieftain mine and the expansion of the Middleback Range project. These results are indicative that a similar expansion is likely to be experienced in years to come in other communities as a result of planned and developing mines such as the Menninie Dam and Wilcherry Hill projects which are both near the town of Kimba and the Iron Road Warramboo mine site. These community expansions will of course be dependent on the size of operations. Whilst these population expansions are likely to result in more revenue for councils they will also result in the need for more services provision. [6]

4.10.6 Regional Development Australia Whyalla and Eyre Peninsula (RDAWEP) have identified the divergence of wages between the mining and agriculture industries as a serious threat to the maintenance of an agricultural workforce.

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[6] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf



Figure 12: Unemployment data for Eyre and Western Zone (Source: Workforce Wizard Region Report, Sep 2014 (http://workforcewizard.skills.sa.gov.au/default.aspx)

4.10.7 In general, the Eyre and Western Zone experiences higher unemployment and participation rates compared to South Australia.

4.10.8 In conjunction with low rates of labour force participation, the Whyalla population also experiences above average levels of unemployment for all of the key population groups.

4.10.9 Although the wider Eyre Peninsula is relatively secure in economic terms and labour force participation, it is highly dependent on seasonal conditions for the region's primary industries.

	Unemployment Rates		Participation Rates	
	Eyre and Western with councils	South Australia	Eyre and Western with councils	South Australia
	%	%	%	%
Males	5.9	6.0	69.3	68.3
Females	5.7	5.5	57.0	57.4
Youth (15-24) Full-Time	13.6	13.7	35.4	28.6
Mature (45-64)	4.1	3.6	69.4	70.3
Aboriginal	19.7	18.0	43.1	46.6
People With Disabilities (15-64)	14.6	13.5	20.9	19.5
Total	**5.9**	**5.7**	**63.2**	**62.7**

Figure 13: Unemployment and Labour Force Participation Rates, 2011 for Eyre and Western Zone (Source: Workforce Wizard Region Report (http://workforcewizard.skills.sa.gov.au/default.aspx)

4.11 Education

4.11.1 Residents in the Eyre and Western Zone have lower levels of school achievement compared to the state. According to the 2011 census data, 40.1% of the E&W population aged between 15 and 64 years have completed year 12 (or equivalent), compared to 54.2% in the state.

4.11.2 The share of Eye and Western labour force with Certificate III or higher qualifications was lower than that of South Australia, with 46.2% in the zone compared to 54.4% for the state.

4.11.3 The most common qualification in the zone was Certificate III and IV qualification (with 27.2%) compared to the state's 22.4%.

4.11.4 The zone has higher proportions of people without qualifications than in the state; 51.2% of the labour force in the zone had no post-school qualifications compared to 43.6% for the state

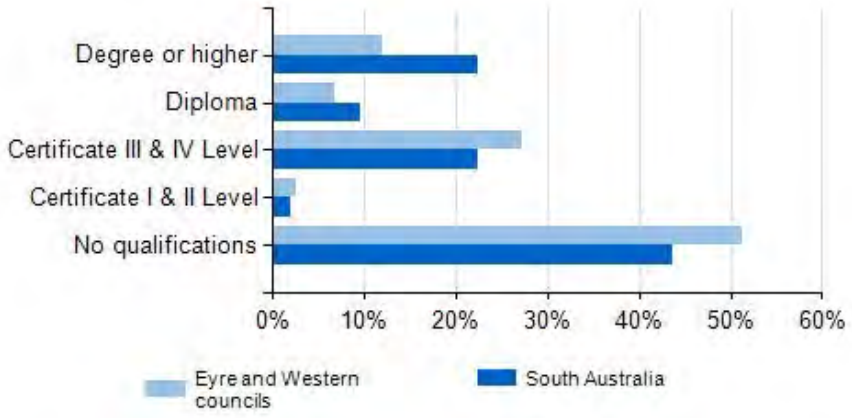


Figure 14: Highest Non-School Qualifications, 2011 (Source: Sep 2014 Workforce Wizard Region Report (http://workforcewizard.skills.sa.gov.au/default.aspx)

4.11.5 The zone has higher proportions of people without qualifications than in the state; 51.2% of the labour force in the zone had no post-school qualifications compared to 43.6% for the levels of post-school education vary greatly between council areas. Port Lincoln and Whyalla Council areas have higher levels of post-school education than other councils in the Eyre Peninsula which in part reflects the professional occupational profile afforded in the larger centres, construction activity which is dependent on trade qualifications and government services and administrations.

4.11.6 Figures 12 and 13 show post-school qualifications held in the region by percentages. There are no major differences between the nine smaller council areas.[7]

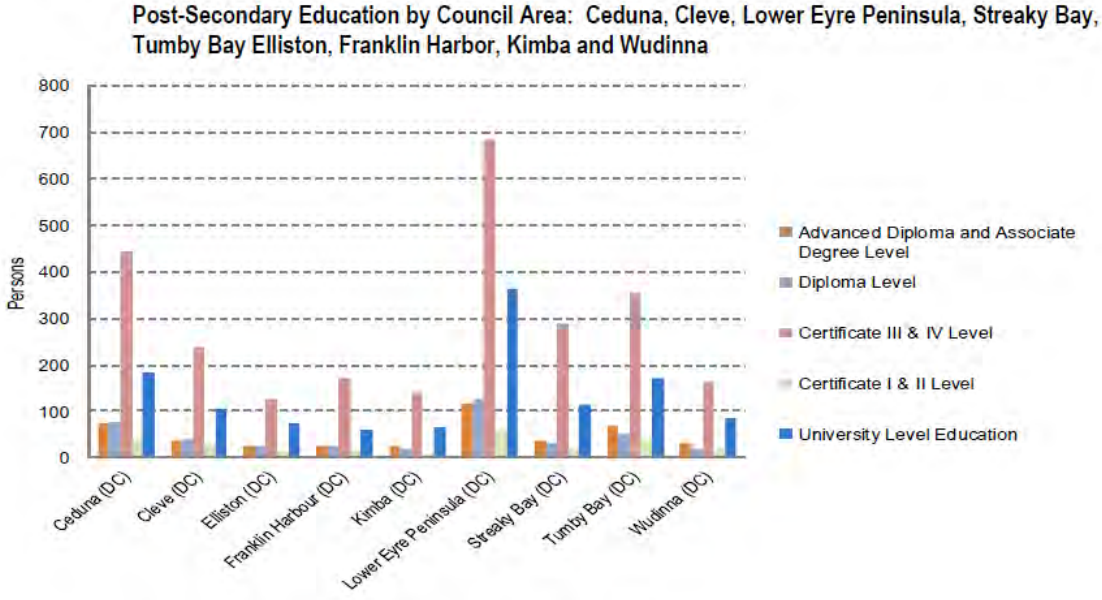


Figure 15: Post-secondary education by Council Area for all E&W Councils except Whyalla and Port Lincoln (Source: Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, 2013)

[7] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

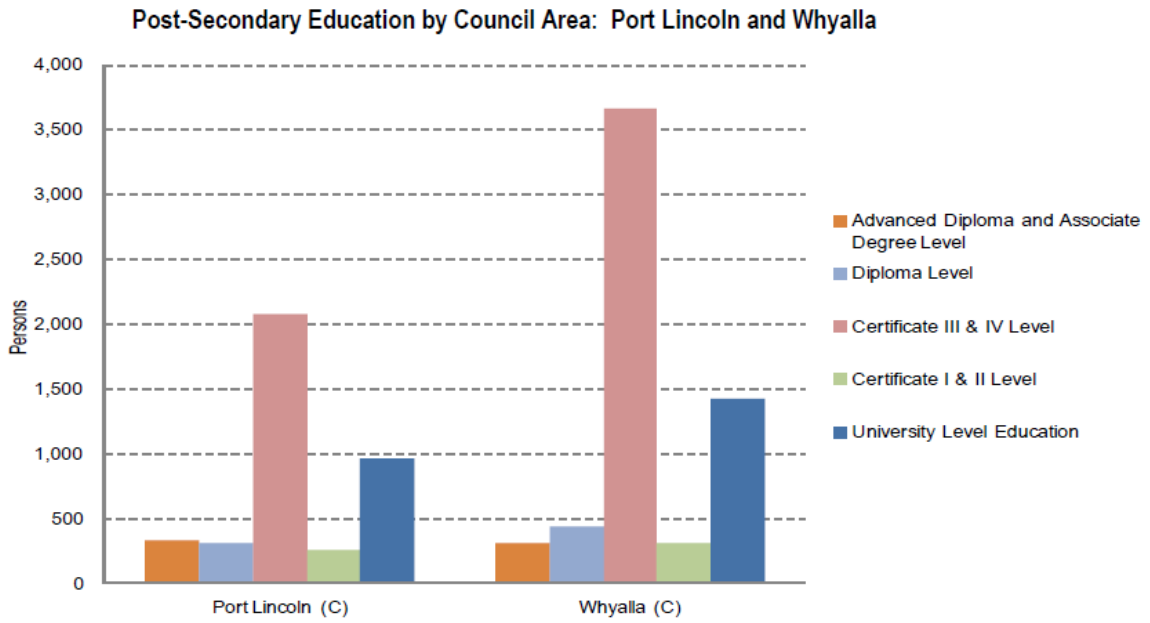


Figure 16: Post-secondary education by Council Area for Whyalla and Port Lincoln (Source: Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, 2013)

4.12 Socio-economic status

4.12.1 Income and education are indicators of socio-economic status that can impact on community connection and inclusion.

4.12.2 The City of Whyalla is characterised by consistently higher than average unemployment and low workforce participation. The population of Whyalla experiences a degree of economic disadvantage. Even though estimates of personal income for 2003-07 are significantly higher in Whyalla, income averages are negatively impacted by above average numbers of people on income support.

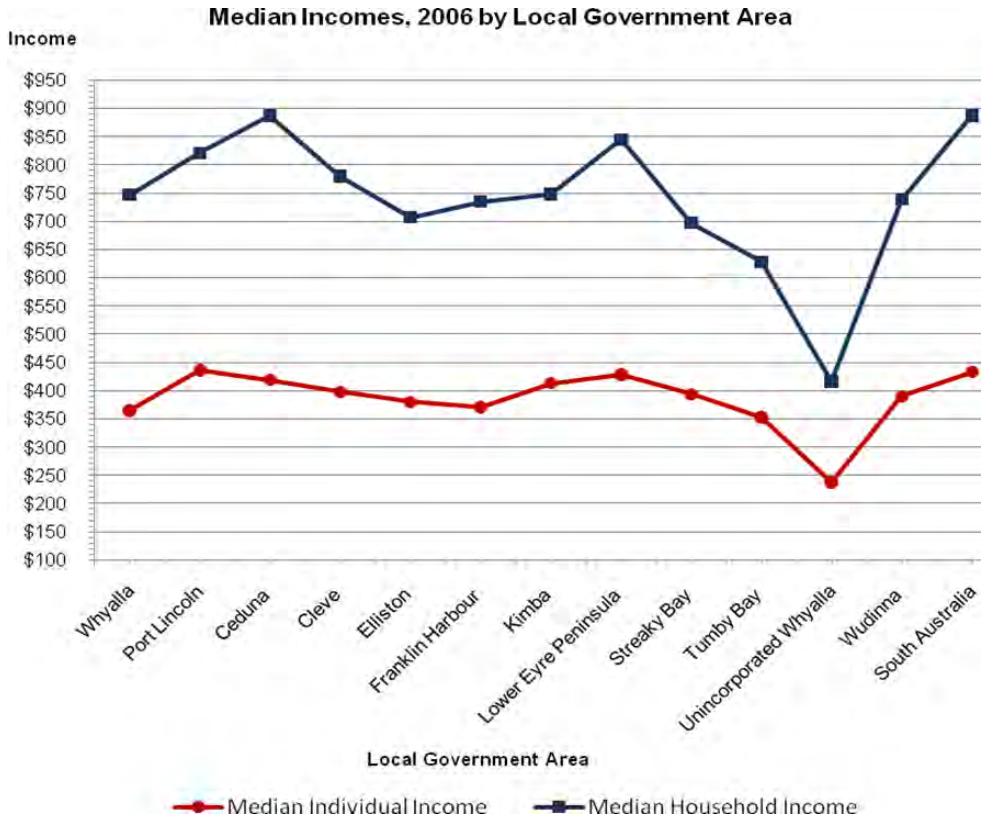


Figure 17 – Median Incomes by LGA

Source: Australian Bureau of Statistics, Population Census 2006

4.12.3 Based on the socio-economic index for areas of Whyalla is the most disadvantaged LGA with a score below the South Australian average. The most advantaged areas are Kimba and Cleve.

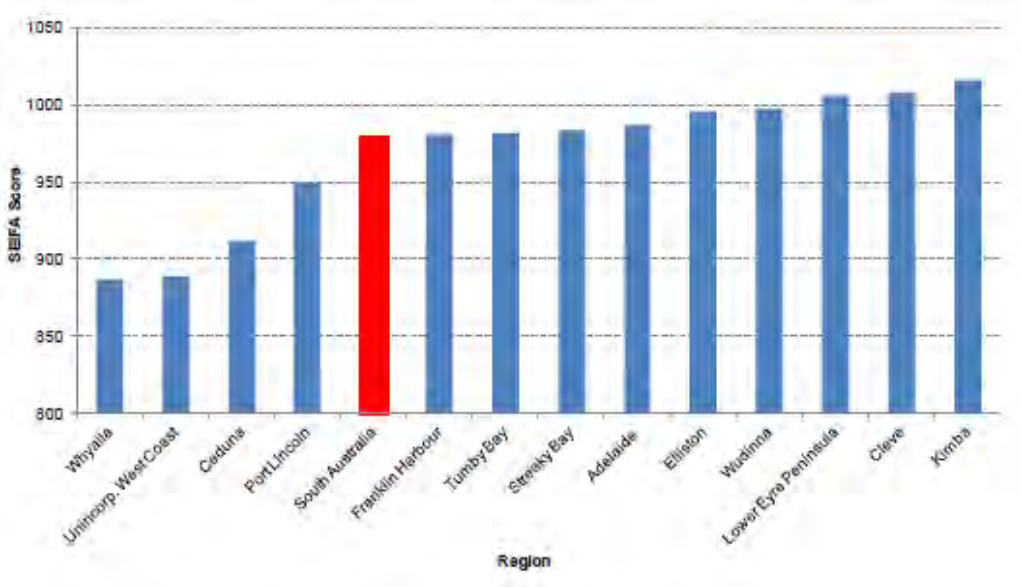


Figure 18: Index of relative socio-economic disadvantage, 2006 (Source: South Australian Centre for Economic Studies)[8]

4.13 Accommodation

4.13.1 Just over 13% of residents on the Eyre Peninsula and 9.7% of people in Whyalla fully own their own dwellings (see table 11).

4.13.2 A proportion of the population in both areas are purchasing their own homes - 12.27% in Whyalla and 9% in the wider Eyre Peninsula region.

4.13.3 In 2006, the ABS reported approximately 21,000 dwellings in the Zone of which 10,700 were separate houses, 3,800 were semi-detached, row, terrace or townhouses.

4.13.4 Rental accommodation is in demand in the region with 8.8% of residents in Whyalla utilising State Housing Authority properties. Only 2.8% of Eyre Peninsula's population reside in rental accommodation. It is important to note that this figure applies to the entire Eyre Peninsula region, whereas in reality, most housing authority dwellings are located in Port Lincoln and Ceduna.

[8] https://www.adelaide.edu.au/saces/economy/regionprofiles/Fact_sheet_RDAWEP_Final_May_2012.pdf

WHYALLA EYRE REGION		Semi-detached		Dwelling		
	Separate house	row or terrace house, townhouse etc	Flat, unit or apartment	Other dwelling	structure not stated	Total
Fully owned (Eyre)	4,459	93	129	132	0	4,813
Fully owned (Whyalla)	1,803	399	21	7	0	2,230
Total	**6,262**	**492**	**150**	**139**	**0**	**7,043**
Being purchased (Eyre)	3,240	113	42	47	0	3,442
Being purchased (Whyalla)	2,103	685	4	7	0	2,799
Total	**5,343**	**798**	**46**	**54**	**0**	**6,241**
Rented						
Real estate agent (Eyre)	425	95	133	0	0	653
Real estate agent (Whyalla)	236	357	128	0	0	721
State or territory housing authority (Eyre)	569	162	171	0	0	902
State or territory housing authority (Whyalla)	454	1,518	48	0	0	2,020
Person not in same household (Eyre)	998	76	134	24	0	1,232
Person not in same household (Whyalla)	160	134	53	0	0	347
Housing co-operative/community/church group (Eyre)	108	21	41	0	0	170
Housing co-operative/community/church group (Whyalla)	8	7	3	0	0	18
Other landlord type (Eyre)	288	19	31	34	0	372
Other landlord type (Whyalla)	93	42	16	14	0	165
Landlord type not stated (Eyre)	202	7	24	9	0	242
Landlord type not stated (Whyalla)	32	21	8	0	0	61
Total	**3,573**	**2,459**	**790**	**81**	**0**	**6,903**
Other tenure type (Eyre)	112	13	24	7	0	156
Other tenure type (Whyalla)	13	3	5	0	0	21
Total	**125**	**16**	**29**	**7**	**0**	**177**
Tenure type not stated (Eyre)	282	24	52	29	0	387
Tenure type not stated (Whyalla)	119	131	12	0	0	262
Total	**401**	**155**	**64**	**29**	**0**	**649**

Table 13 – Tenure Type

Source: Australian Bureau of Statistics, Population Census 2006

4.14 Median House Prices

4.14.1 House prices across the region experienced modest growth during 2008 to 2010. Whilst the median house prices during this period increased in Cleve and Port Lincoln other areas (Elliston, Kimba, Lower Eyre Peninsula, Streaky Bay, Tumby Bay and Whyalla) had a decline in 2009 but a rise in 2010. Ceduna, Franklin Harbour and Wudinna experienced decline in median prices. The price fluctuations can be attributed to a number of factors which had a direct effect on regional economic activity and buyer confidence. These include the global financial crisis, consecutive interest rate rises, drought conditions and low grain prices.

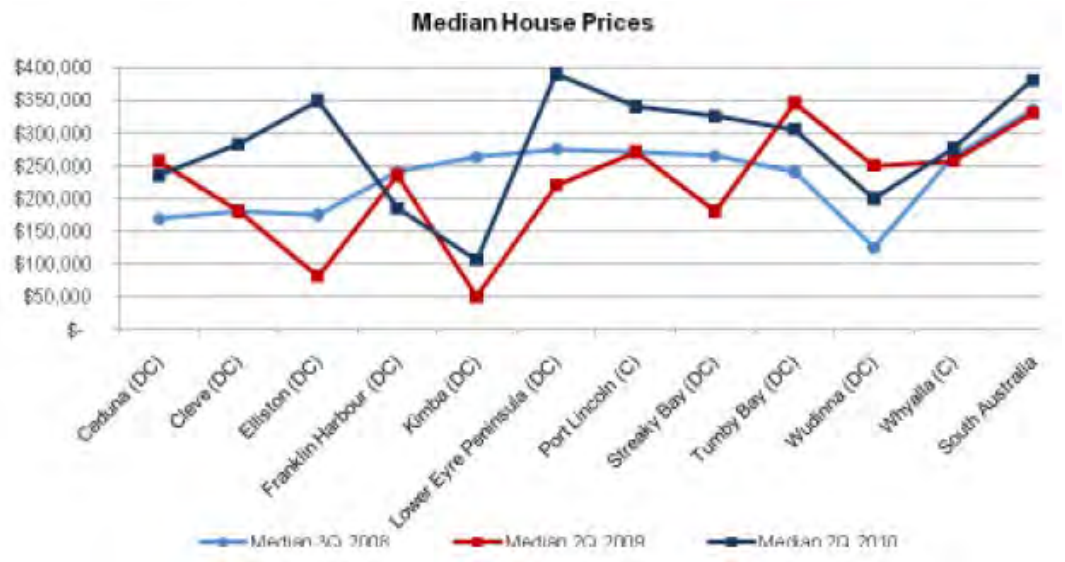


Figure 20 – Median House Prices

Source: Real Estate Institute of South Australia: House Statistics, median prices, property data.com.au, 2010

4.15 Employment by top occupations

4.15.1 Eyre and Western Zone had large proportions of residents employed as Managers and Technicians & Trades Workers as per the 2011 population census.

4.15.2 Between 2006 and 2011, the largest increase in employment in the E&W zone occurred in people working as Machinery Operators and Drivers, while the largest decrease occurred in Managers.



Figure 21: Highest Non-School Qualifications, 2011 (Source: Sep 2014 Workforce Wizard Region Report (http://workforcewizard.skills.sa.gov.au/default.aspx)

WHYALLA AND EYRE		
SECTOR	**TOTAL PERSONS**	**%**
Agriculture, Forestry and Fishing	3,887	16.24
Manufacturing	2,825	11.8
Retail Trade	2,763	11.54
Health Care and Social Assistance	2,563	10.71
Education and Training	1,934	8.08
Construction	1,619	6.76
Accommodation and Food Services	1,385	5.79
Public Administration and Safety	1,066	4.45
Transport, Postal and Warehousing	954	3.98
Other Services	849	3.55
Administrative and Support Services	656	2.74
Professional, Scientific and Technical Services	608	2.54
Wholesale Trade	607	2.54
Mining	516	2.16
Financial and Insurance Services	381	1.59
Not stated	341	1.42
Rental, Hiring and Real Estate Services	261	1.09
Inadequately described	257	1.07
Electricity, Gas, Water and Waste Services	201	0.84
Information Media and Telecommunications	153	0.64
Arts and Recreation Services	114	0.48

Figure 22 - Employment by Industry Sector

Source: ABS, 2006 Census, Population and Housing- Industry of Employment, Catalogue No. 2068.0

4.16 Travel of residents for work[9]

4.16.1 Figure 23 illustrates the place of residence and journey to work data for each of the 11 councils; the Eyre and Western Region is large and townships are dispersed, and this is well reflected in the journey to work data, where only population movements to work across council areas are significant between Port Lincoln Council and Lower Eyre Peninsula (DC) and perhaps also Tumby Bay, otherwise they are within the council region.

Place of Residence and Journey to Work

LGA of Work	Ceduna (DC)	Cleve (DC)	Elliston (DC)	Franklin Harbour (DC)	Kimba (DC)	Lower Eyre Peninsula (DC)	Port Lincoln (C)	Streaky Bay (DC)	Tumby Bay (DC)	Whyalla (C)	Wudinna (DC)
LGA (Place of Residence)											
Ceduna (DC)	1407	0	0	0	0	0	7	17	0	0	0
Cleve (DC)	0	715	10	9	9	0	7	0	5	6	0
Elliston (DC)	0	4	407	0	0	6	3	7	0	0	9
Franklin Harbour (DC)	0	31	0	354	3	0	5	0	4	18	0
Kimba (DC)	0	5	0	6	485	0	0	0	0	5	6
Lower Eyre Peninsula (DC)	0	5	8	0	0	928	912	0	24	9	0
Port Lincoln (C)	3	15	12	4	0	201	5059	0	36	16	3
Streaky Bay (DC)	20	0	20	0	0	5	3	717	0	0	10
Tumby Bay (DC)	0	27	0	4	3	72	108	0	762	3	0
Whyalla (C)	0	0	0	0	4	0	4	0	0	6204	0
Wudinna (DC)	4	3	4	0	3	0	0	10	0	0	529

Note: Cells in this table have been randomly adjusted to avoid the release of confidential data. No reliance should be placed on small cells.
Source: ABS 2011 using 2011 Census of Population and Housing using ABS Tablebuilder.

Figure 23 – Travel of residents for work statistics

[9] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

5 Community Capacity

5.1 Definition

5.1.1 This is defined as the community's capacity (human and physical) to contribute to the prevention of disasters, such as volunteer brigade and level of experience in dealing with disasters (frequency and magnitude. It isn't something easily measured. It is a fluid thing that can change as communities grow or decline and as younger generations come through.

5.2 Emergency Services Resources:

5.2.1 The Eyre and Western Zone is protected by CFS brigades, SES units, a retained MFS firefighting presence, SAPOL and SA Ambulance Services.

5.2.2 Emergency Services are spread throughout the Zone. Historically major incidents have been bushfires.

5.2.3 Local government resources are available to assist during emergencies, but may be under extreme pressure to cope during very large incidents, due to their priority to maintain council services, their workforce size and land area.

5.3 Country Fire Service

5.3.1 The CFS is a volunteer based fire and emergency service and they are the hazard leader for rural fire.

5.3.2 Region 6 Headquarters located at Port Lincoln has 6 Groups made up of 60 Brigades and 1707 Volunteers.

CFS Incident Statistics:

Financial Year	2010/11	2009/10	2008/09	2007/08	2006/07	2005/06
Fixed Alarm (no cause)	70	20	54	77	66	97
HAZMAT Incidents	7	4	9	9	7	6
Miscellaneous Incidents	4	4	11	11	4	4
Other Incidents/Attendance	20	34	32	19	10	13
Rural Incidents	112	116	104	107	101	116
Special Service Incidents	25	19	28	12	24	22
Structure Incidents	26	19	22	19	19	15
Vehicle Related Incidents	102	86	74	83	71	76
Totals:	**366**	**302**	**334**	**334**	**302**	**349**

Table 14 – CFS Incident Statistics

CFS Groups and Brigades

Group: Caralue		
Buckleboo	Minnipa	Warramboo
Cootra	Mount Damper & District	Wudinna
Kimba	Waddikee	Yalanda / James
Group: Eastern Eyre		
Arno Bay & District	Gum Flat	Tuckey
Cleve	Mangalo	Wharminda
Cowell	Pondooma	
Darke Peak	Rudall District	
Group: Elliston		
Elliston	Murdinga	Tooligie Hills
Lock & Districts	Port Kenny	
Mount Wedge	Sheringa	
Group: Lower Eyre Peninsula		
Coffin Bay	Kapinnie	Wangary
Coulta	Karkoo	Wanilla
Cummins	Lincoln	White Flat
Edillilie	Mount Hope	Yeelanna

Greenpatch	North Shields	
Group: Tumby Bay & District		
Brooker	Lipson & District	Ungarra
Butler	Port Neill	Yallunda Flat
Cockaleechie	Region 6 Air Support	
Koppio	Tumby Bay	
Group: Western Eyre		
Calca	Penong	Smoky Bay
Ceduna	Poochera & District	Streaky Bay
Far West	Sceale Bay	Wirrulla and District

Table 15 – CFS Groups and Brigades

5.4 Metropolitan Fire Service

5.4.1 The MFS is tasked with responding to fire, chemical incidents and other emergencies.

5.4.2 **Port Lincoln Station -**

The South Australian Metropolitan Fire Service (MFS) has been servicing the City of Port Lincoln since February 1930. On 6 April 2010, the MFS commenced operations from a new four-appliance bay station on Saint Andrews Terrace.

5.4.2 This station provides facilities for firefighting personnel to train and undertake study to improve their knowledge of firefighting techniques, fire behaviour, leadership and management.

5.4.3 The design of the station includes rainwater storage of 81,000 litres which can be used for firefighting operations.

5.4.4 MFS personnel respond to emergency incidents such as urban and structural fires, road accident rescue, hazardous materials and industrial accidents in the City of Port Lincoln Council area.

5.4.5 **Whyalla Station -**

Whyalla Fire Station is staffed by 25 Retained Fire fighters providing prevention and community preparedness, operational preparedness, emergency response and community recovery services 24 hours per day, every day of the year.

Whyalla Fire Station has a Medium Urban 4WD Pump, a 5,000 litre Tanker, a Rescue Pumper and a Regional Operational Support Appliance, which is a 4WD 400 litres per minute pumping capacity.

The MFS has a 40-year station and a 15-year appliance replacement or refurbishment program.

5.5 South Australian Police

5.5.1 15 Stations including the Local Service Area headquarters at Port Lincoln

Stations	
Ceduna	Minnipa
Cleve	Streaky Bay
Cowell	Tumby Bay
Cummins	Whyalla
Port Lincoln	Wirrulla
Elliston	Wudinna
Kimba	Yalata
Lock	

Table 16 – Police Stations

5.6 South Australian Ambulance Service

5.6.1 There is a mix of 3 Career Stations, 8 Volunteer Stations, 3 Industrial based services and 1 Community Emergency Response Team in the Eyre and Western zone. These are listed below.

Stations located at	
Ceduna (Career Station - Co-located station)	Port Bonython (Industrial based services)
Cleve (Volunteer Station)	Port Kenny (Community Emergency Response Team)

Coffin Bay (Volunteer Station)	Port Lincoln (Career Station)
Cummins (Volunteer Station)	Streaky Bay (Volunteer Station)
Iluka (Industrial based services)	Tumby Bay (Volunteer Station)
Iron Duke (Industrial based services)	Whyalla (Career Station plus Industrial based services)
Kimba (Volunteer Station)	Wudinna (Volunteer Station)
Lock (Volunteer Station)	

Table 17 – SAAS Stations

5.7 State Emergency Service

5.7.1 The SES is a volunteer emergency service organisation which gives immediate assistance during emergencies and disasters. They are the hazard leader and control agency for extreme weather.

5.7.2 11 Units based across the zone.

Units located at	
Ceduna	Streaky Bay
Cleve	Tumby Bay
Cummins	West Operations Coordination Unit – Port Lincoln
Kimba	Whyalla
Nullabor	Wudinna
Port Lincoln	Yalata

Table 18 - SES Stations

5.8 Australian Volunteer Coast Guard and Sea Rescue Squadron

5.8.1 Various operators monitor the marine communications networks throughout the Eyre and Western zone. Marine rescue tasks are carried out by the State Emergency Service from their units equipped and trained to undertake this service.

5.9 Department of Water, Natural Resources and Environment (assist with bushfires only)

5.9.1 DEWNR assist with bushfire fighting operations when requested and operate under the direction of the CFS. Firefighting units are based at a number of sites around the zone. The listing of parks below is an indicator of where these units may be placed. However, during the fire season and when fire bans are announced units may be moved around to provide more appropriate fire cover.

Park locations	
Acraman Creek Conservation Park	Nuyts Archipelago Conservation Park
Calpatanna Waterhole Conservation Park	Pinkawillinie Conservation Park
Coffin Bay National Park	Point Labatt Conservation Park
Gawler Ranges National Park	Sir Joseph Banks Group Conservation Park
Lake Gilles Conservation Park	Venus Bay Conservation Park
Lake Newland Conservation Park	Wahgunyah Conservation Park
Laura Bay Conservation Park	Wittelbee Conservation Park
Lincoln National Park	Yellabinna Regional Reserve
Mamungari Conservation Park	Yumbarra Conservation Park
Nullarbor National Park	

Table 19 – Park locations

5.10 Local Government

5.10.1 11 councils are represented and they undertake response and recovery activities to assist emergency services and local communities in times of need.

5.11 Non-Government Organisations

5.11.1 Community based service groups' e.g. Lions, Rotary are well represented across the zone.

5.12 Health Services

5.12.1 There are three major hospitals at Whyalla, Port Lincoln and Ceduna. There are eight smaller hospitals spread across the Zone.

5.12.2 Many health services are located throughout the Whyalla and Eyre Peninsula region. Eleven hospitals service 57,500 people. Whyalla, Port Lincoln and Ceduna Hospitals are regional facilities attracting priority status. Eight smaller hospitals provide a range of primary health services, including residential aged care.

5.12.3 There are seven Community Health Centres located at Pt Lincoln, Tumby Bay, Cleve, Whyalla, Lock, Wudinna and Ceduna. Four Dedicated Indigenous Health Centres are located in Pt Lincoln, Ceduna, Whyalla and Yalata (Tullawon).

General Practice Services

General Practices	No. of GPs	Practice Manager	No. of Practice Nurses
Whyalla	20	yes	18
Port Lincoln	16	yes	21
Ceduna	4	yes	6
Eastern Eyre Peninsula (Cleve, Cowell, Kimba)	5	yes	2
Lower Eyre Peninsula	6 1 Registrar	yes	4
Mid west (Streaky Bay, Elliston, Wudinna)	3 1 Registrar	yes	6

Figure 24 – General Practice Services

Source: Draft 10 Year Local Health Service Plans 2010-2019

5.12.4 Summary of Health Services

Hospital	Services Provided	Visiting and/or specialists/Allied Heath	Gaps in Services
Whyalla	• Accident/Emergency • Midwifery • Surgical Services • High Dependency • Children's Health Unit • Palliative Care • Renal Dialysis • Mental Health Services • Obstetrics • Anaesthetics	• Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist • Counsellors • Diabetes Educator • Community Mental Health	
Pt Lincoln	• Accident Emergency • Palliative Care • Surgical Services • Obstetrics/maternity • Allied Health • Mental Health • PATS • Renal Dialysis • Domiciliary Care	• Gynaecologist • ENT • Ophthalmologist • Paediatricians • Urologist • Dermatologist	• Drug Alcohol Workers • Palliative Care • Podiatrists
Ceduna	• Accident Emergency • Maternity/Obstetrics • Surgical Services • Aged Care • Renal Dialysis Unit • Anaesthetics	• Audiologist • Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist (Most from Whyalla)	• Podiatrists • Mental Health • Physiotherapists • Occupational Therapists
Cummins	• Accident Emergency • Palliative Care • Surgical Services • Obstetrics	• Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist	• Mental Health Workers • Dietician • Psychologists
Tumby Bay	• Aged Care • Accident Emergency	• Drug Alcohol • Asthma Advisor • Podiatrist • Dietician • Speech Pathologist	• Mental Health Workers • Dietician • Psychologists
Streaky Bay	• Accident Emergency • Palliative Care • Surgical Services	• Audiologist • Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist (Most are contracted by Pt Lincoln Heath Services)	• Dietician • Exercise Physiologist • Occupational Therapist
Elliston	• Aged Care • Accident Emergency	• Drug Alcohol • Asthma Advisor • Podiatrist • Dietician • Speech Pathologist (Most are contracted by Pt Lincoln Heath Services)	• Dietician • Exercise Physiologist • Occupational Therapist
Wudinna	• Accident Emergency • Obstetrics • Aged Care • Mental Health Services		• Dietician • Exercise Physiologist • Occupational Therapist
Cleve	• Accident Emergency • Community Nursing • Ante Natal Services	• Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist • Counsellors • Diabetes Educator	• Mental Health Nurses Palliative Care • Podiatrists • Speech Pathologist
Kimba	• Accident Emergency • Community Nursing • Ante Natal Services	• Dietician • Occupational Therapist • Physiotherapist • Podiatrist • Speech Pathologist • Counsellors • Diabetes Educator	• Mental Health Nurses Palliative Care • Podiatrists • Speech Pathologist

Figure 25 – Health Services

Source: Draft 10 Year Local Health Service Plans 2010-2019

For official use only

5.13 Aged Care Facilities

5.13.1 There are about 17 aged care facilities in the Eyre and Western Zone, a detailed list is provided at the end of this plan.

Town	No. of Residential Aged Care Facilities	Notes
Whyalla	4	
Port Lincoln	2	
Ceduna	3	1 of these is a dedicated Indigenous facility
Eastern Eyre Peninsula (Cleve, Cowell, Kimba)	3	1 in each of these communities
Lower Eyre Peninsula (Cummins, Tumby Bay)	2	1 in each of these communities
Mid west (Streaky Bay, Elliston, Wudinna)	3	1 in each of these communities

Figure 26 – Aged Care Facilities
Source: Draft 10 Year Local Health Service Plans 2010-2019

5.14 Volunteers

5.14.1 The Census question which this data is derived from confirms that these statistics count each person who volunteers as one person, no matter how many places they volunteer for or how many hours they do. The 2010 Productivity Commission Report noted that over the last ten years the trend has been for more people to volunteer, but to do fewer average hours.

5.14.2 It is important to note that these rates refer to volunteers as a whole not just those who volunteer in an emergency management capacity; however it could be expected that some who volunteer in other areas would be prepared and able to assist in an emergency.

5.14.3 Table 19 details the types of activities performed by Volunteers in SA, based on the findings of the 2010 Volunteering in SA Survey.

Table 20 - Types of Volunteering Activities (2010)*

Type	Percentage
Management or Committee Roles	20
Admin/Clerical/Recruitment	20
Preparing Food	19
Fundraising or Sales	19
Coach/Referee/Judge	17
Teach/Instruct/Provide Information	16
Repairing/Maintenance/Gardening	10
Befriending/Supportive Listening/Counselling	8
Field Work Other	8
Personal Care/Assistance	7
Performing/Media Production	6
Transporting People/Food/Other Goods	5
Frontline Emergency Services	3

* **Source:** Volunteering in South Australia in 2010 – Office for Volunteers (www.ofv.sa.gov.au/pdfs/Survey_VolunteeringinSAin2010.pdf). Data release date - May 2010

5.14.4 There are several issues in relation to volunteering which need to be considered. First, many volunteers are ageing and may be in need of these services themselves soon, decreasing the capacity for volunteers to respond in times of emergencies; second, many volunteers work full time and getting time off to volunteer for an event during business hours can be difficult. They may also be needed to assist in the emergency in their work role and not be available as a volunteer (e.g. council staff being CFS volunteers); a third issue that need to be considered is the difference between trained volunteers and spontaneous volunteers.

5.14.5 Managing spontaneous volunteers is also an issue; however FACHSIA have produced a management kit which provides some suggestions for dealing with this issue prior to, during and after an emergency. A copy can be located at:
http://www.fahcsia.gov.au/sa/communities/pubs/Documents/spontaneous_volunteering/spontaneous.pdf

5.14.6 The capacity of local businesses to assist in an incident also needs to be considered (e.g. supermarket or op shop providing goods during and after an incident). The history of local businesses' ability to respond to emergency management events is high due to the community spirit within the Zone.

5.14.7 The Volunteers Unit of Department for Communities & Social Inclusion may activate the Volunteer Emergency Recovery Information System (VERIS) to record volunteer interest and expertise and also the needs of disaster affected people. VERIS was developed to support the coordinated engagement of spontaneous non-affiliated volunteers who offer assistance in emergency recovery. The activation and availability of VERIS is publicised through the media. Volunteers and disaster affected people may register on VERIS by logging onto www.veris.sa.gov.au or telephoning 1300 885 068 (toll free). During periods when there is no emergency event VERIS is a dormant website.

6 Industry

6.1 Overview

6.1.1 Eyre Peninsula is one of South Australia's most productive regions generating an estimated $2.4 billion in revenue annually. The region is highly export oriented with around $1.76 billion of product being sent to various overseas markets.

6.1.2 Eyre and Western Zone is home to 4% of South Australia's population and produces over 30% of South Australia's grain production and more than 60% of its seafood.

6.1.3 The region's economy relies on agriculture, aquaculture, fishing, tourism and mining, mineral processing as the main industries. While the agricultural and fishing sectors are well established, aquaculture and tourism have developed more recently as major sources of employment and revenue for regional communities. The City of Whyalla is unique having a substantial industrial base, which is focussed on mining, engineering and steel production facilities.

6.1.4 According to the 2011 population census, the Eyre and Western Zone had large proportions of residents employed in Agriculture and Forestry & Fishing and Health care & Social assistance while the largest industry groups in South Australia were Health care and Social assistance and Retail trade.

6.1.5 Between 2006 and 2011, the largest increase in employment in the Eyre and Western Zone occurred in people working Mining, while the largest decrease occurred in Agriculture and Forestry & Fishing.

6.1.6 According to the 2006 Census, agriculture, forestry and fishing were the region's largest employing industries collectively accounting for 16.2% of the total workforce with 3,887 people being employed. Manufacturing was the second largest employing sector with 11.8% of the regional workforce and the largest employer in Whyalla with 23.5% of total employment in the city. The region's retail trade sector provided 11.5% of regional employment, with health care and social assistance employing 10.7% of the workforce. Other large employment sectors in the region included education and training; construction, accommodation and food services.

6.1.7 Recent trends indicate a strong demand for a skilled workforce across all industry sectors. Growing industries - including aquaculture, food processing, tourism, mining and renewable energy - are diversifying the region's workforce and skills base and providing new employment opportunities.

6.1.8 With strong industry growth in the region projected - particularly in the key emerging industries of mining and renewable energy - employment outcomes will be maximised by focusing on training that is directly linked to industry needs and demands

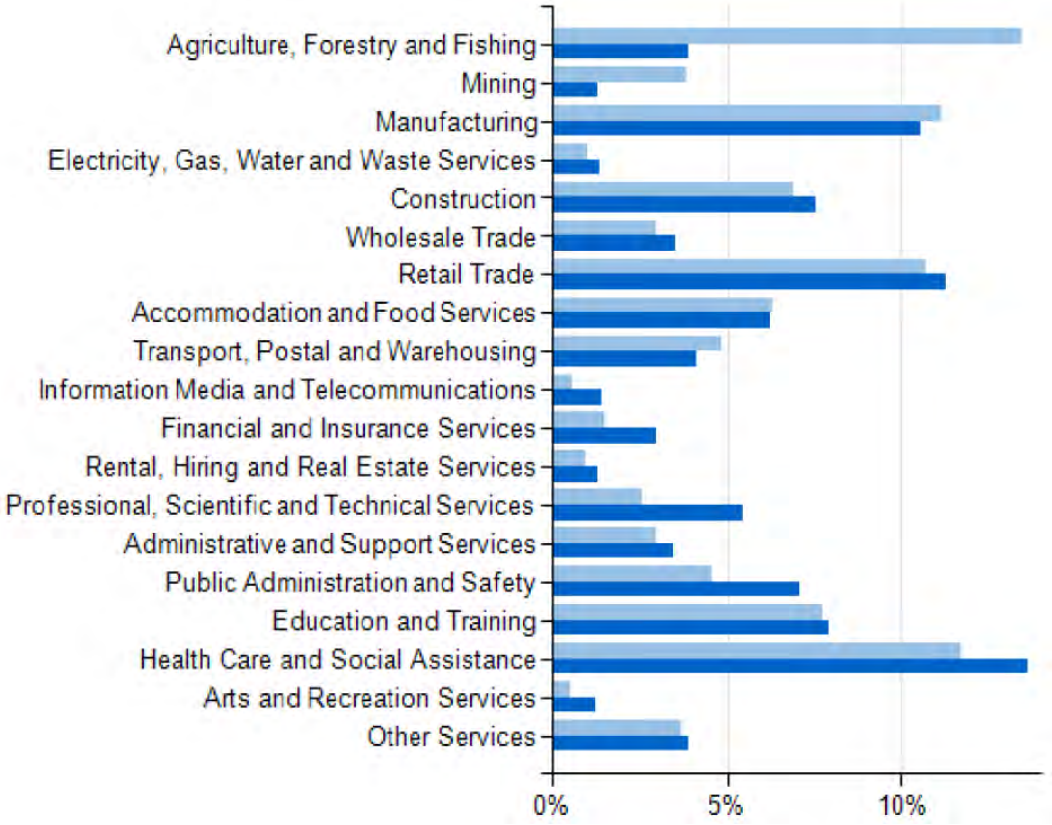
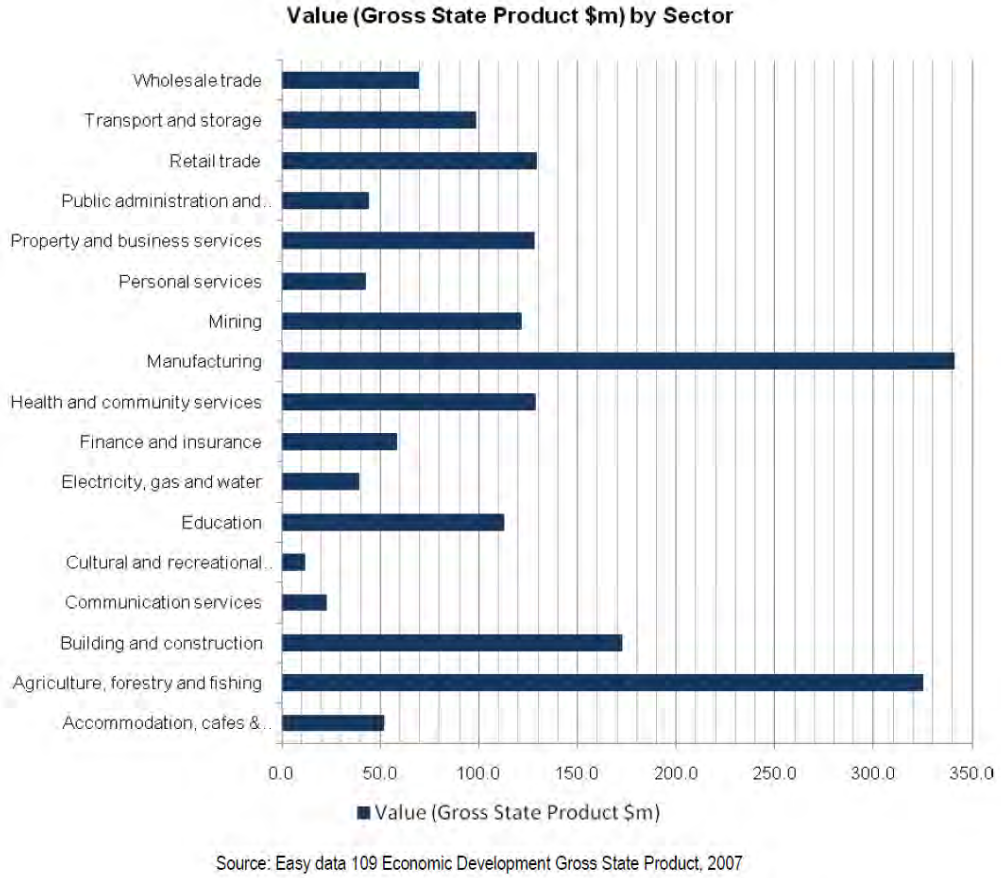


Figure 27: Employment by Industry, 2011 (Source: Workforce Wizard Region Report (http://workforcewizard.skills.sa.gov.au/default.aspx)



Source: Easy data 109 Economic Development Gross State Product, 2007

Figure 28 – Value (GSP $m) by Sector

INDUSTRY	EMPLOYMENT 2001	EMPLOYMENT 2011	% CHANGE
Agriculture, Fishing and Forestry	4,012	3,338	**-16.8**
Health Care and Social Assistance	2,111	2,996	**29.5**
Manufacturing	2,786	2,890	3.6
Retail Trade	2,481	2,669	7.0
Education and Training	1,764	1,967	10.3
Construction	1,340	1,813	**26.1**
Accommodation and Food Services	1,356	1,595	15.0
Transport, Postal and Warehousing	999	1,260	**20.7**
Public Administration and Safety	1,152	1,172	1.7
Mining	199	957	**79.2**

RDAWEP Top Ten Industries by Employment, 2011. (ABS Census 2011 from www.myregion.gov.au).

Table 21 – Eyre and Western top 10 Industries by Employment

6.2 Estimates of Gross Regional Product (GRP) and related statistics[10]

Estimates of Gross Regional Product (GRP) and Related Statistics

Local Government Area	GRP	Local jobs	Worker productivity (GRP/worker)	Unemployment	Businesses	GRP per business	Population
	$m	No.	$	%	No.	$	No.
Ceduna	195	1,919	101,593	8.6	327	596,330	3,662
Cleve	114	972	117,505	1.3	348	327,586	1,750
Elliston	84	612	137,346	3.5	233	360,515	1,055
Franklin Harbour	51	505	101,409	2.5	164	310,975	1,288
Kimba	85	642	133,238	0.7	240	354,166	1,100
Lower Eyre Peninsula	213	1,612	132,219	3.4	560	380,357	5,014
Streaky Bay	114	1,099	103,830	3.2	334	341,317	2,177
Tumby Bay	126	1,099	114,894	2.5	345	365,217	2,616
Wudinna	82	700	117,172	3.4	214	383,177	1,267
Port Lincoln	742	7,562	98,122	5.3	1,654	448,609	14,519
Whyalla	819	7,486	109,462	6.9	832	984,375	22,580
Total State	83,212	815,253	102,000	5.5	140,458	592,433	1,633,625

Source: Id and National Economics (2013).

Figure 29- Estimates of Gross Regional Product (GRP) for Eyre and Western Zone

6.3 Manufacturing and Mining

6.3.1 Manufacturing and resource processing is the third largest industry in the region. Manufacturing contributes approximately $341 million per annum to South Australia's gross regional product. The manufacturing sector employs 2,825 people accounting for about 11.8% of regional employment.

6.3.2 A history of iron and steel production forms the foundation of a strong mining-related industrial base centred on mining and associated steel fabrication, manufacturing, construction and hydraulics industries, most of which are located in Whyalla.

6.3.3 In recent years steel making at Whyalla has increased significantly from 460 thousand tonnes to 1.1 million tonnes per annum. OneSteel is the major manufacturer and recently expanded its steelmaking and ore export operations extending the operational life of the company to at least 2027.

[10] Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

6.3.4 Whyalla is the largest industrial city in regional South Australia and has become the principal centre for manufacturing, steel production, steel fabrication, resource processing and education in the Upper Spencer Gulf and Eyre Peninsula regions. Whyalla is strategically located with transport, engineering, business and retail sectors directly involved in meeting the demands of local and remote mining and mineral processing developments.

6.3.5 Whyalla is consequently being positioned as "South Australia's Mining Services Hub".

6.3.6 As part of this marketing strategy, the Whyalla City Council developed an industrial estate during 2009 to meet the growing needs of the mining sector. The industrial estate, located on land gifted to the City by OneSteel, has been purpose designed to meet the future infrastructure needs of the mining sector.

6.3.7 The proposed expansion of Olympic Dam and Prominent Hill, the development of the Arafura Resources rare earth processing facility and the establishment of new mining operations in the northern areas of the state will have an immediate impact on Whyalla as the industrial centre of the region. Very good opportunities exist for further development of Whyalla's manufacturing and resources processing capacity.

6.3.8 There are 33 developing minerals projects in South Australia (excluding those already approved) and of these 15 projects are located in, or proximate to the Eyre Peninsula.[11]

6.3.9 Eyre Peninsula is rich in iron ore with high grade deposits of hematite and magnetite; mineral exploration has identified up to one billion tonnes or iron ore product with an estimated value of between $100 billion and $140 billion (Regional Development Australia, Whyalla and Eyre Peninsula). Exploration companies believe the total unexploited iron ore resource on the Eyre Peninsula to be well in excess of the already discovered one billion tonnes. Annual export production is expected to reach 15 to 20 million tonnes within five years, but development of the region's iron ore mining industry is dependent on the construction of a deep sea port capable of handling panamax size ships (Regional Development Australia, Whyalla and Eyre Peninsula).

6.3.10 Although mining has not previously dominated the region's economy, mining operations are already having a significant economic impact. Situated in the provinces of the Gawler Craton and Eucla Basin, the Eyre Peninsula is rapidly becoming one of Australia's most promising and emerging mineral frontiers. Existing mining operations are largely centred on iron ore extraction and a heavy minerals sands mining operation at Jacinth-Ambrosia. Exploration activity in recent years has identified significant prospects including;

- Heavy mineral sands, kaolin, gold, silver, nickel, copper and iron ore in the northern and western parts of the region, and
- Iron ore and coal on the eastern, central and lower Eyre Peninsula.

6.3.11 In 2010, the Eyre Peninsula Mining Alliance (EPMA) was formed to promote minerals development on the Eyre Peninsula and address issues in relation to infrastructure development and sustainable growth of the mining industry.

6.3.12 The region has the largest deposit of gypsum in the Southern Hemisphere, significant iron ore resources and an emerging world class heavy mineral sands resource. Established commodities already being mined include:

- Iron ore: hematite production: 5.6 million tonnes,
- Gypsum production: 1.9 million tonnes,
- Heavy mineral sands production: 77,300 tonnes (when in full production this will increase to over 300,000 tonnes per annum), and
- Salt production: 129,992 tonnes.

Impact of Mining and Resources Development: A case study for Eyre Peninsula Councils, https://www.lga.sa.gov.au/webdata/resources/files/Impact%20of%20Mining%20and%20Resource%20Development_a%20case%20study%20for%20Eyre%20Peninsula%20Councils.pdf

Gawler Craton Eucla Basin	2008-2009 Quantity (t)		Value ($)	2007-2008 Quantity (t)		Value ($)
Commodity						
Iron Ore- hematite	5,607,884	$	400,040,484	5,301,002	$	352,110,709
Iron Ore- magnetite	1,238,892	$	95,349,412	921,692	$	63,581,401
Gypsum	1,991,890	$	6,981,717	2,110,144	$	7,025,959
Salt	129,992	$	1,528,006	104,845	$	1,073,882
	Dec 2009-June 2010 Estimate only		Estimate only			
Heavy mineral sands - zircon	43,500		$23,490,000	-	$	-
Heavy mineral sands - ilmenite	28,600		$4,890,600	-	$	-
Heavy mineral sands -rutile	5,200		$1,742,000	-	$	-
TOTAL	9,045,958	$	534,022,219	8,437,683	$	423,791,951

Figure 30 - Resources Production: Whyalla and Eyre Peninsula Region

Sources: MESA Journal, Volume 56, March 2010, PIRSA, Iluka Resources, June 2010, Quarterly Production Report

6.3.13 The region's mining operations collectively contribute $517 million to the South Australian economy. This figure will grow significantly as new mining operations are established.

6.3.14 Expenditure in the Gawler Craton on exploration, drilling and other activity reached $200 million in 2008. Exploration has revealed exciting opportunities for world class resource deposits in heavy mineral sands, iron ore, gold, silver, kaolin, uranium and nickel. Opportunities are also being explored for petroleum and gas in the far west. (Source: MESA Journal, Volume 56, March 2010, PIRSA)

Operational Mines	Company	Commodity	Total Resource (unless otherwise indicated)	Annual Production 2008-2009
Project Magnet	OneSteel	Iron Ore- Hematite Magnetite	Hematite: 32.5Mt at 59.2% Fe (including reserve)	
			Magnetite: 234.2Mt at 40.0% DTR (including reserve)	
Jacinth/ Ambrosia	Iluka Resources	Heavy Mineral Sands:	239.1 Mt material at 4% HM for 9.5 Mt in situ at 48% zircon, 28% ilmenite, 5% rutile Contained Commodity: 4,512,000t zircon, 2,632,000t ilmenite, 45,700t rutile	
Mineral Development Projects	**Company**	**Commodity**	**Total Resource (unless otherwise indicated)**	**Proposed Annual Production**
Tunkillia	Minotaur Exploration/ Helix Resources Ltd	Gold silver :	Oxide gold: 6.3Mt at 1.1g/t gold for 224 ozs (0.5g/t cutoff) Contained metal 803,000 oz gold, 1,658,000 oz silver	
			Primary gold: 9.3Mt at 1.9 g/t gold and 5.5g/t silver	
Poochera Kaolin	Minotaur Exploration	Kaolin	20Mt inferred resource (calcine ISO brightness 96.5)	
Warramboo	Iron Road Mining	Iron Ore- Magnetite	110.5Mt at 19.4% Fe, 50% SiO_2, 11.4% Al_2O_3, 0.09% P, 2.5% LOI (Loss on ignition) (inferred)	

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Wilgerup	Centrex Metals	Iron Ore- Hematite	13.2Mt at 57.7% Fe, 4.9% SiO_2, 2.8% Al_2O_3, 5.1%, LOI, 0.5% P (inferred)	2 Mt pa iron ore
Wilcherry Hill	Iron Clad Mining	Iron Ore- Magnetite	59.9Mt at 30.6% Fe (indicated inferred)	2 Mt pa iron ore
Mullaquana	Uranium SA	Uranium Oxide	12Mt at 0.02% eU_3O_8 Contained Commodity: 2,700t U_3O_8	
Tripitaka	Iluka Resources	Heavy Mineral Sands:	42 Mt material at 2.4% HM for 1 Mt in situ at 65% zircon Contained commodity: 650,000t zircon	

Figure 31 - Resource estimates and production statistics of Eyre Peninsula's major operating mines and pending mineral development projects

Source: MESA Journal, Volume 56, March 2010, PIRSA

6.3.15 PIRSA Minerals indicates South Australia has 20 major approved mines in operation. Five of these approved mines are located on the Eyre Peninsula and include:

Mine	Resources	Company	Location
Iron Chieftain	Iron ore	Arrium Limited	Middleback Ranges, north western Eyre Peninsula
Jacinth-Ambrosia Mineral Sand Project	Heavy mineral sands	Iluka Pty Ltd	Approximately 200km NW of Ceduna
Middleback Range: Project Magnet	Iron ore	Arrium Limited	Middleback Ranges, north western Eyre Peninsula
Wilcherry Hill project	Iron ore	Ironclad Mining Limited	30km north of Kimba, northern Eyre Peninsula
Wilgerup	Iron ore	Centrex Metals Ltd	30km SE of Lock, central Eyre Peninsula

Figure 32 – Approved Mines on the Eyre Peninsula

Source: PIRSA Minerals, list of approved mines

6.3.16 PIRSA Minerals also indicates there are 31 developing projects in South Australia. Eleven of these developing projects are located on the Eyre Peninsula and include;

Mine	Resources	Company	Location
Atacama	Heavy minerals	Iluka Resources Ltd	200km NW of Ceduna
Bungalow	Iron ore	Centrex Metals Ltd (joint venture with Baogang)	9km N of Cowell
Fusion Iron Magnetite Project	Iron ore	Centrex Metals Ltd (joint venture with WISCO)	South Eastern Eyre Peninsula
Gum Flat	Iron ore	Lincoln Minerals Ltd	Southern Eyre Peninsula, within 20km of Port Lincoln
Hematite Extension Project	Iron ore	Arrium Limited	Middleback Ranges, north western Eyre Peninsula
Menninnie Dam	Lead, Zinc and Silver	Terramin Australia Ltd	Northern Eyre Peninsula, 160km WNW of the Port Pirie lead smelter
Paris	Silver	Investigator Resources Ltd	Northern Eyre Peninsula, approximately 500km NW of Adelaide
Poochera	Kaolin	Minotaur Exploration Ltd	100km SE of Ceduna on Eyre Peninsula
Samphire Project	Uranium	Uranium SA	Approximately 20km south-west of Whyalla on Eyre Peninsula
Sonoran	Heavy minerals	Iluka Resources Ltd	200km NW of Ceduna
Tripitaka	Heavy minerals	Iluka Resources Ltd	Approximately 100km NW of Ceduna
Typhoon	Heavy minerals	Iluka Resources Ltd	200km NW of Ceduna
Uley Graphite Project	Graphite	Mega Graphite Inc	South Eyre Peninsula, approximately 23km W and SW from Port Lincoln
Warramboo	Iron ore	Iron Road Ltd	Central Eyre Peninsula

Source: PIRSA Minerals, list of developing mines.

Figure 33 – Developing Mines on the Eyre Peninsula

6.4 Agriculture

6.4.1 The climate and soils of the E&W Zone support a substantial agricultural industry, producing approximately 42% of South Australia's total value exceeding $500 million per annum.

6.4.2 The region is known for its broadacre cropping and production of high quality premium grains such as high protein wheat, malting barley varities, milling oats and canola.

6.4.3 The region's agriculture industry produces more than 38% of South Australia's wheat crop and 26% of the barley crop. The annual volume of all grains in 2010-11 was 3.2 million tonnes. However this was an exceptional year with an above average yield resulting from higher than normal rainfall. The industry is very reliant on seasonal conditions and the market price of rain at harvest where most of the crop is sold.

6.4.4 Grain export volumes account for about 97% of Eyre Peninsula's annual wheat, barley, and legume production. The region is renowned for high quality premium grains, particularly high protein wheat, malting barley varieties and milling oats.

6.4.5 The rising value of livestock has rejuvenated interest in the sheep industry and there has been significant reinvestment into meat and wool in recent years.

6.4.6 In 2006 the Australian Bureau of Agricultural and Resource Economics (ABARE) indicated that 48% of Eyre Peninsula's farms were classified as small farms (i.e. with output of less than $150,000 per annum) and the majority of the region's agricultural production occurred on medium and large sized farms. 80% of the total value of agricultural production occurred on farms that have production exceeding $300,000 per annum and over 55% on farms exceeding $600,000 per annum. The average income on broad acre farms in the region is generally above the national average, but this varies more from year to year than the national average. This is a reflection of the direct impact of seasonal variability on farm performance.

6.4.7 Broad acre farms account for 95 % of farms in the region. This comprised 2,242 farms in 2004, of which more than 86% were dependent on grain growing or combined grain and livestock production. This is significantly higher than the national average where only 23% of farms dependant on a mixed production system. (ABARE 2006) (Source: Eyre Strategic Plan, 2007)

GRAIN TYPE	TONNES PRODUCED 2010-11
Wheat	2.23 million
Barley	738,000
Canola	110,400
Pulses (peas, chick peas, beans, lentils)	107,400
Oats	32,500
Triticale	13,700
TOTAL GRAIN PRODUCTION 2010-11	**3,232,000**

Figure 34 - Total Eyre Peninsula Grain Production (2010-2011)

6.5 Grain Production

6.5.1 Intensive cropping has become a feature of farming systems on Eyre Peninsula since the early 1990s. The demise of the wool industry in the late 1980s was a key driver for this change. The introduction of canola plus the availability of improved grain species helped to provide disease breaks in cropping rotations, greatly enhancing yields.

6.5.2 Cropping systems in the more reliable farming districts include wheat, barley, grain legumes (field peas, lupins, faba beans) and canola. In the lower rainfall districts, wheat and barley are the main crops with many farms also running sheep. Pastures in these systems tend to be based on unimproved self-regenerating annual species, including medic and annual ryegrass and a variety of weed species. Wheat still remains the key cash crop in both systems. In more recent times alternative pastures, such as lucerne and saltbush, have been used to address issues such as erosion and salinity.

6.5.3 The move to conservation farming systems with reduced tillage and retainment of stubble residues, has improved soil moisture conservation and resulted in significant yield benefits in dry seasons. More recently, the move to no-till farming has further improved moisture and soil conservation across the region. This technology has significantly reduced erosion through lower levels of soil disturbance and higher levels of surface cover.

6.5.4 The use of trace elements, increased use of nitrogen fertilisers, improved crop varieties and species and the availability of more effective herbicides have improved productivity and sustainability.

6.5.5 Amelioration of water repellent properties and the low inherent fertility of sandy soils through clay spreading and delving has greatly benefited crop production and reduced wind erosion.

6.5.6 On the Eyre Peninsula, the most spectacular yields (average 2.38t/ha) are achieved on the southern part of the region, which experiences the most consistent rainfall. The eastern division includes districts of high and low rainfall and yields of average 1.55t/ha. The western division has the lowest yields (average 1.1t/ha) and has not experienced productivity growth over the last 8 seasons. The lower and eastern divisions have experienced growth in wheat and barley yields of about 1% per year.

6.6 Livestock Production - Sheep

6.6.1 Sheep account for 70% of livestock production in the region. The rising value of sheep has rejuvenated the industry in recent years. Livestock grazing is also important to the region, especially in relation to sheep for meat and wool.

6.6.2 A combination of drought and reduced returns saw the Australian sheep flock decline from 120 million head in 1997 to around 86 million in 2007. As a result, global market demand is likely to exceed the ability of Australian farmers to supply sheep meat in the short term. This should strengthen prices.

6.6.3 Developing countries are expected to lead global meat consumption demand over the next 10 years, with a projected growth of 27%. This should provide opportunities for increased sales for both lower priced and higher value sheep meats.

6.6.4 In recent years the region's sheep producers have started to re-build flocks. Rather than purchasing the traditional Australian Merino, farmers have been investing in crossbreds for prime lamb markets and new breeds such as the Dorper, South African Merino, and the Dohne Merino. These breeds are adaptive and hardy, and thrive in low rainfall areas. The majority of sheep farming is currently in the central and northern parts of the region.

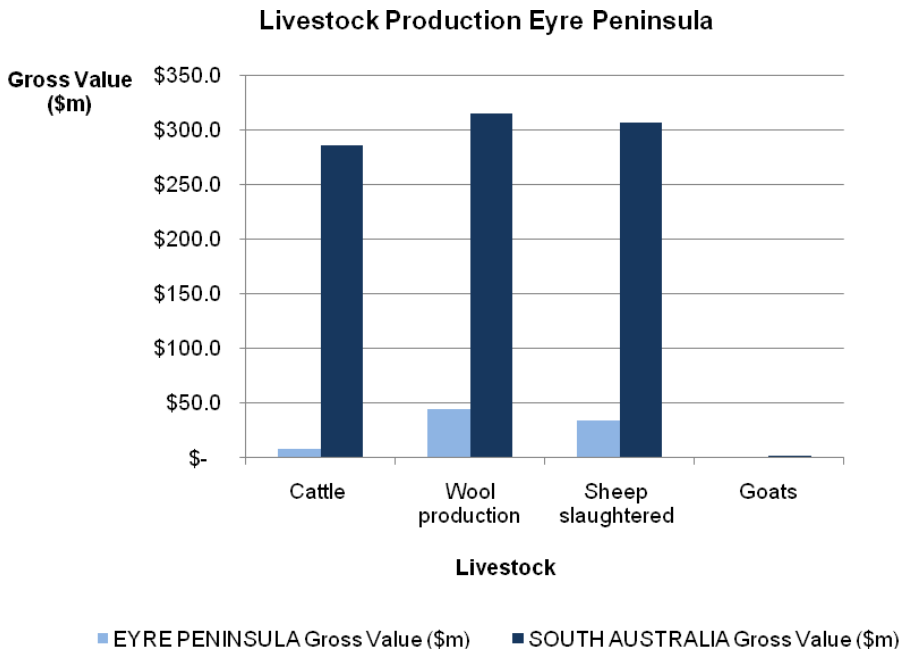


Figure 35 – Livestock Production Eyre Peninsula
Source: ABS Agricultural Commodities, 2006/2007

6.7 Fishing and Aquaculture

6.7.1 The Zone's coastal and marine environments sustains a commercial fishing and aquaculture industry which accounts for approximately 77% of South Australia's seafood produce and employs over 1,000 people.

6.7.2 The region is renowned internationally for the production of high quality Southern Bluefin Tuna and also supports other important aquaculture industry sectors that produce oysters, abalone, mussels and marine finfish. The industry is highly trade focused exporting over 80% of seafood produce from the region. Most products are exported to New Zealand, Asia, Europe, the Middle East and USA.

6.7.3 Aquaculture injects around $272 million per annum into the regional economy and employs 1,024 people across Eyre Peninsula, with tuna farming and oyster growing being the largest employers.

6.7.4 Growth sectors in aquaculture are predicted to be marine finfish, mussels, abalone, oysters and tuna. Eyre Peninsula is developing a notable domestic and international reputation for premium quality seafood. This reputation has been based on sustainable production and best practice environmental management.

6.7.5 In a major marketing initiative, Eyre Peninsula has developed a regional food brand under the banner of 'Eyre Peninsula – Australia's Seafood Frontier' to differentiate and highlight the regional seafood product as world's best quality.

Value of Production (EP)	(2006/07)
SPECIES	$'000
Southern Bluefin Tuna (aquaculture)	137 650
Oysters (aquaculture)	37 841
Mussels (aquaculture)	1 032
Abalone (aquaculture)	7 155
Other fish species (aquaculture)	17 674
Prawns (wild catch)	39 386
Rock lobster (wild catch)	18 000
Sardines (wild catch)	18 517
Abalone (wild catch)	19 600
Marine Scale fish (wild catch)	16 400

Figure 36 – Value of Seafood Production – Eyre Peninsula (1)
Source: ABARE, Fisheries and Aquaculture Production 2006/07

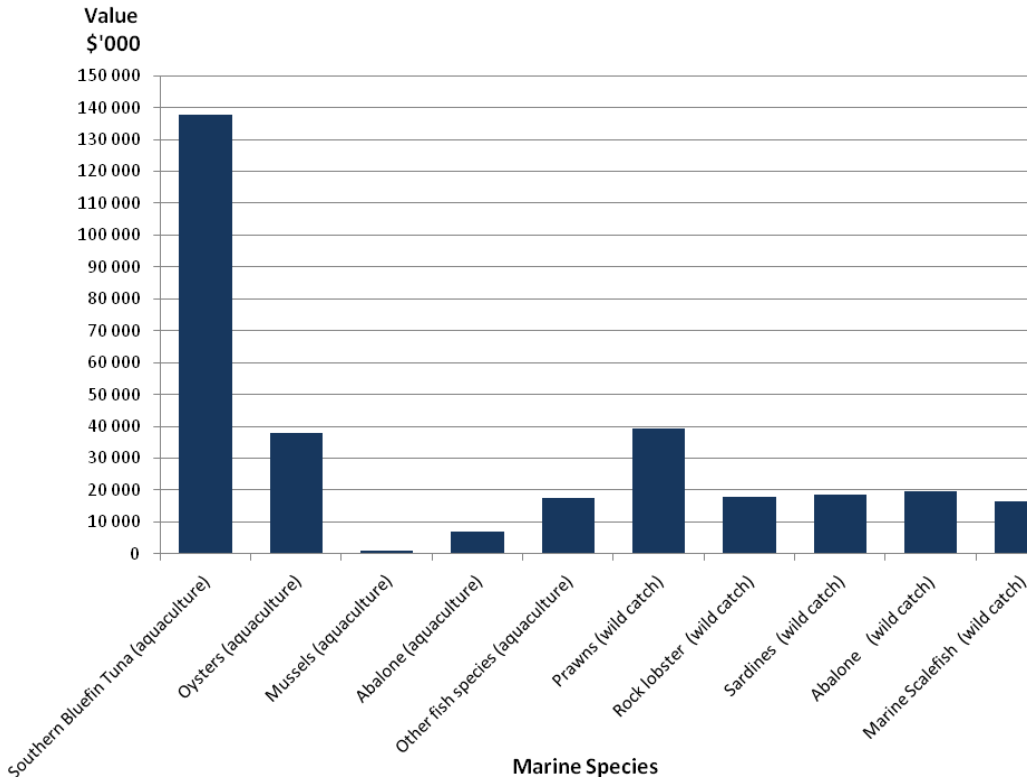


Figure 37 - Value of Seafood Production – Eyre Peninsula (2)
Source: ABARE, Fisheries and Aquaculture Production 2006/07

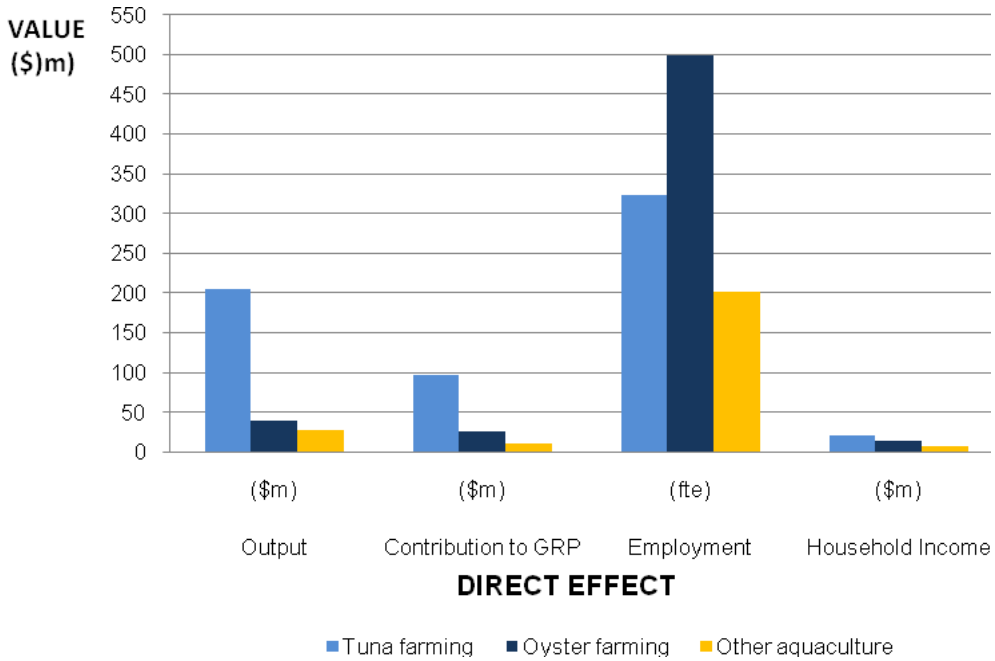


Figure 38 – Economic Impact of Aquaculture South Australia
Source: Economic Impact of Aquaculture on the South Australian State and Regional Economies 2007/08, May 2009, Econsearch Pty Ltd

6.8 Future Economic Outlook for Fishing and Aquaculture Industries

6.8.1 Global seafood consumption has risen steadily at an average annual rate of 2.9%, reaching 107 million tonnes in 2005. Future projections suggest that the increasing global demand for seafood will result in favourable price movements over time for fishers, particularly for the major production species which are generally export oriented. In the medium term, the expected growth in production of high value species is likely to result in an increase in the value of fisheries exports through to 2014-15 (Source: ABARE, Australian

Fisheries, The Global Context, March 2010) but this will need to be balanced against the appreciation of the Australian dollar.

6.8.2 Although future growth is looking positive, Eyre Peninsula's commercial fisheries sectors are subject to global market forces and operating costs are exposed to considerable fluctuation. In recent years industry input costs have been strongly influenced by rising fuel prices, fluctuating interest rates, unfavourable exchange rates, increasing wage rates and the global financial crisis; all of which had a negative impact on the fishing operation incomes (Source: AFMA, Corporate Plan, 2009-2014).

6.8.3 Into the future the Australian fisheries sector will face a number of challenges. These include continual changes to the operating environment because of exchange rate movements, increasing fuel costs, and ongoing changes to management arrangements. Additionally, longer-term challenges are emerging including a move to adopt market standards in fish labelling and retailing in domestic and international markets, and the challenge of adapting to climate change (Source: ABARE, Australian Fisheries, The Global Context, March 2010).

6.8.4 Given the above, the future sustainability and competitiveness of the region's fishing sectors will depend on individual businesses being able to constructively address price pressures. Maximising the overall efficiency of operations by reducing input costs such as fuel usage, wages, and travel distances will be essential.

6.8.5 The fishing industry's ability to achieve its maximum growth potential will be linked to the timely development of efficient and cost-effective transport infrastructure. The establishment of dedicated unloading infrastructure at Thevenard will provide significant operational benefits to the industry enabling businesses to achieve a more efficient cost path to market for their seafood products.

6.9 Tourism

6.9.1 Tourism is one of the region's key growth industries, with the region gaining a reputation for its premium seafood products and its unique and world class nature based visitor experiences (whale watching at the Head of the Bight, snorkelling or diving amongst cuttlefish, sea lions, dolphins and Southern Blue Fin Tuna, cage diving with Great White Sharks and outback camping adventures in the rugged Gawler Ranges).

6.9.2 The Eyre and Western Zone is a famous tourist destination and it is an important and growing sector of the zone's economy, with 582 businesses in the zone being tourism related. Most recent figures indicate that tourism to the E&W Zone brings in $279 million per year to the State.

6.9.3 The Zone houses approximately 1,647,000 overnight visitors per year. It attracts 23% of interstate, 73% intrastate and accounts to 4% of international visitors to South Australia.

6.9.4 The figure below shows the origin of visitors, purpose of domestic day trip visits, international day trip visits, the types of accommodation used and the overall origin of domestic and international day trip visitors the Zone.

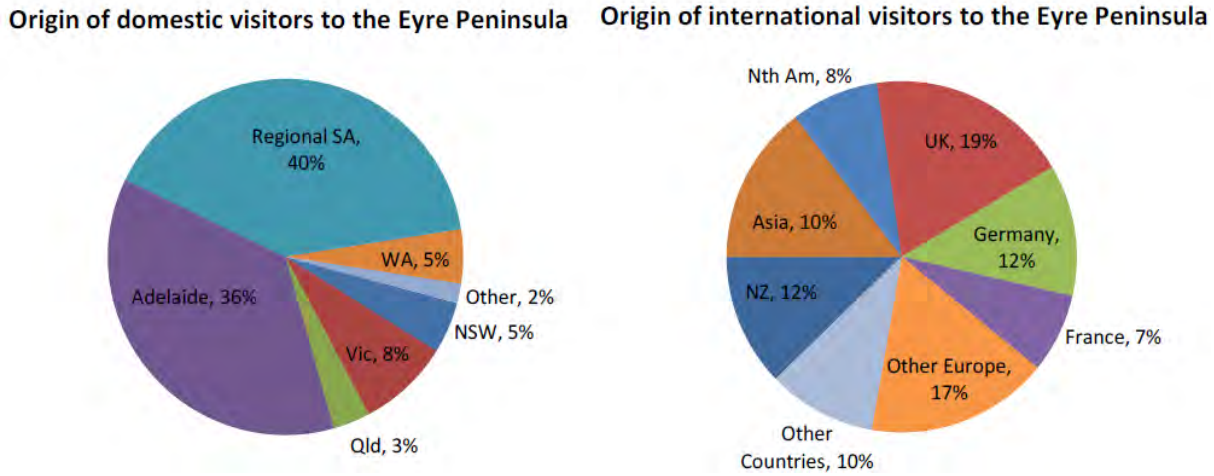


Figure 39 – Origin of domestic and international visitors to the Eyre Peninsula

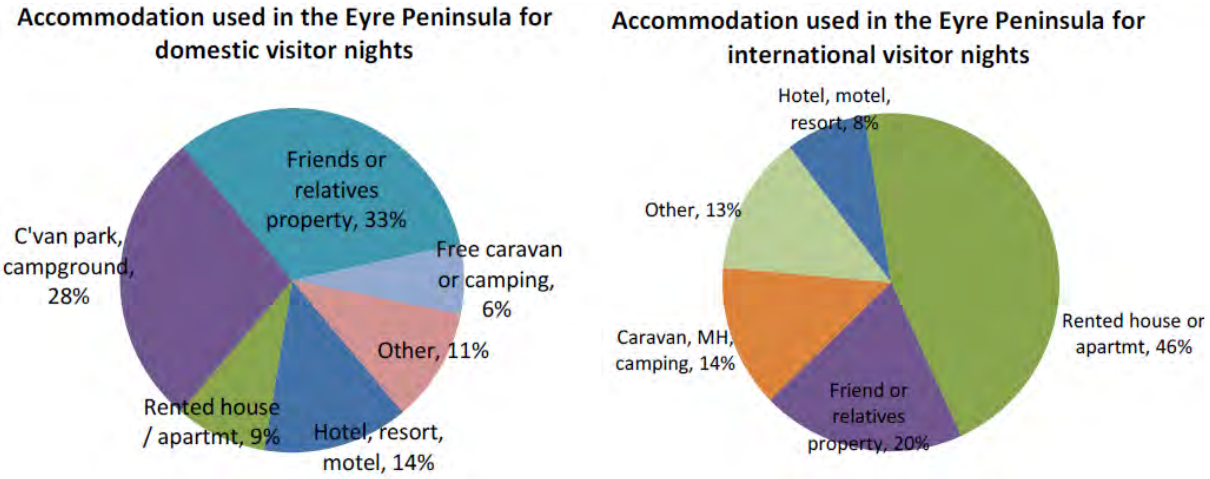


Figure 40 – Accommodation used by visitors to Eyre Peninsula

6.9.5 The average annual visitor summary is shown as below:

Annual Visitor Summary June 2010 - 2012				Average Annual Visitors	
	Intrastate	Interstate	Total Domestic	International	Total visits
Visits	251,000	76,000	**326,000**	14,000	**340,000**
%	74%	22%	**96%**	4%	**100%**
Nights	1,058,000	420,000	**1,478,000**	169,000	**1,647,000**
%	64%	26%	**90%**	10%	**100%**
Average Length of Stay	4.2	5.5	**4.5**	12.1	**4.8**

DAY TRIPS	Average annual Day Trips to the Eyre Peninsula Tourism Region	384,000

	Holiday	VFR	Business	Other	Total
Visits	132,000	110,000	75,000	26,000	**340,000**
%	39%	32%	22%	8%	**100%**
Nights	757,000	506,000	274,000	111,000	**1,647,000**
%	46%	31%	17%	7%	**100%**
Average Length of Stay	5.7	4.6	3.7	4.3	**4.8**

Figure 41 – Annual Visitor Summary from June 2010 – 2012 to Eyre and Western Zone

6.9.6 A snap shot of the tourism listings in the Zone is shown below:

Tourism listings June 2012 - Eyre Peninsula			
Attractions	62	Tour Operators	21
Accredited VICs	4	Events	17
Total Accommodation listings			102
Hotels, motels, resorts	24	Backpackers/hostels	5
C'van parks/camp grnds	22	B & Bs	3
Cabins and Cottages	30	Self Cont. properties	74

Note: some listings have multiple categories of accommodation.

Source: Australian Tourism Data Warehouse

Figure 42 – Tourism listings in Eyre Peninsula

6.9.7 With tourism operations being spread over the length and breadth of the region it is not surprising that business and peer support has been limited. The sector has identified the following as issues of concern:

- Lack of business development and mentoring initiatives being run in the region,
- Problems with maintaining skills development for both owners and employees,
- Inaccessibility of industry specific training (for owners and employees) due to geographic distance to training centres and the high cost of training, and accommodation,
- Ongoing labour shortages,
- Seasonal fluctuations in workforce demand, and
- Problems with attracting and retaining a workforce.

7 Public Buildings, Spaces and Events

7.1 Public Buildings

7.1.1 There are many places where people gather and some significant events that can draw crowds from all over the state, interstate and overseas. Some of these places could also be considered for use in times of recovery.

7.1.2 **Shopping Centres**

- Whyalla contains two major retail centres and several smaller neighbourhood centres. It is also the regional centre for health and education, as well as the base for several state and Commonwealth government agencies.
- Port Lincoln has a similar range of facilities and the city has a strong focus on education, aquaculture and commercial fishing development and a wide range of retail and commercial facilities and community services.
- Ceduna is the major commercial service centre for western Eyre Peninsula.
- The smaller rural centres of Tumby Bay, Streaky Bay, Cummins, Wudinna, Kimba, Lock, Cleve and Cowell all have well-developed shopping and agricultural service precincts.

7.1.3 **Educational Facilities**

- The region contains a number of educational institutions, including TAFE and University of South Australia campuses. Several skills support programs are also underway, including the $8.4 million Mineral Resources and Heavy Engineering Skills Centre in the Upper Spencer Gulf.
- A range of education facilities (schools, preschools and tertiary campuses) are located across the region with specialised training courses in marine science and the seafood industry offered at Port Lincoln.
- There are 3 aboriginal/anangu schools, 8 child care centres, 2 learning together @ home facilities, 3 family day care schemes, 9 out of school hours care and occasion care facilities in the zone. 5 play centres, 24 preschools, 18 primary education facilities, 12 primary and secondary schools combined facilities are dispersed across the E&W Zone. 4 tertiary education facilities, 4 rural care programs and 2 special services are available to the Zone community. A list of all the educational facilities are provided at the end of this plan.

7.1.4 Local Government - Offices and community support systems – libraries, community service centres, child care centres, playgrounds and parks, sporting and recreation facilities.

7.1.5 State Government – Public buildings, offices, health services, education facilities, community facilities, conservation parks and facilities, emergency services facilities, tourism sites, wildlife sanctuaries.

7.1.6 Private / Business – Communication facilities, shopping centres and smaller facilities, banks, food and fuel distribution systems.

7.2 Spaces

7.2.1 There is one National heritage listed place in the Eyre and Western Zone and there are 58 State Heritage listed places in the Zone. These include colonial exploration sites, war memorials, peace gardens, public art sites and items and aboriginal sites of significance.

7.2.2 A list of objects of cultural significance is compiled at the end of this plan.

7.3 Events

7.3.1 Eyre Peninsula hosts a number of events throughout the year. Some of the more popular ones are the Field Days, Port Lincoln Tunarama Festival, Ceduna Oysterfest, Pot Lincoln Cup carnival, Eyre Peninsula farmer and

Fishermen's Market, One Steel Whyalla Gift Carnival, Food and Wine Fair, and local sporting events. Cultural & Community: Art shows and exhibitions, large public concerts, Whale watching and Shark Diving.

8 Critical Infrastructure

8.1 Overview

8.1.1 Critical Infrastructure is those physical facilities, supply chains, information technologies and communication networks, which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact upon the social and/or economic well-being of the State.

8.1.2 The South Australian Government role in Critical Infrastructure Protection is managed by the Critical Infrastructure Support Group of South Australia Police. The Critical Infrastructure Support Group is a part of the State Protective Security Branch. The roles and responsibilities of the Critical Infrastructure Support Group include;

- Working with all jurisdictions to maintain a common cooperative framework for the protection of critical infrastructure (CI),
- Maintaining partnerships with South Australian owners /operators of CI,
- Providing policy, liaison and support as required,
- Ensuring protective arrangements are in place for essential government services,
- Identification of new and review of existing CI sites,
- Assisting CI owners and operators with the development and validation of Plans (Emergency Response, Security & Business Continuity),
- Communicating relevant threat information to CI owners/operators,
- Ensure intelligence is gathered and disseminated to relevant agencies,
- Conducting and participating in exercises involving critical infrastructure.

8.2 Significant Infrastructure

8.2.1 Significant infrastructure includes infrastructure that may be required in an emergency as well as those that if affected in an emergency may have an impact on the community. This includes health services, emergency services, major government facilities and main transport routes. The age and condition of the infrastructure also needs to be considered.

8.3 Utilities

8.3.1 The Eyre and Western region is an important contributor to South Australia's rapidly expanding renewable energy sector. There has been significant investment in windfarms, while wave conditions on the west coast provide excellent prospects for wave technology with Elliston identified as a possible site for a demonstration plant. The region has world-class solar radiance levels, a major factor in developing solar power, and the 'hot rocks' that attract geothermal investment. Development of these resources will contribute to economic development of the region and the state, and to achievement of South Australia's environmental targets.[12]

[12] Eyre and Western Region Plan, A volume of South Australian Planning Strategy, DPTI

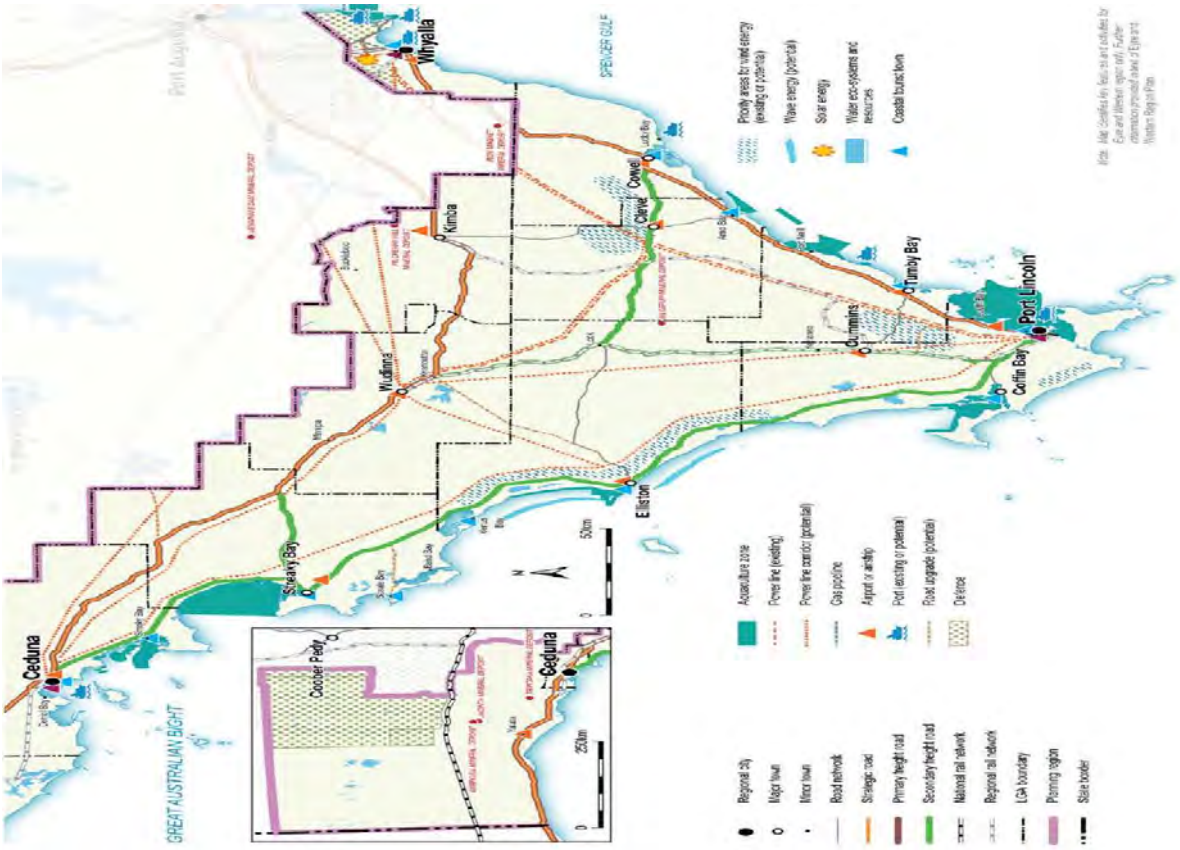


Figure 43 – Eyre and Western Region's renewable energy map

8.3.2 Water

8.3.3 The Eyre and Western region does not have abundant water resources. The topography of the region dictates that there is little surface run-off and few surface waters. The Tod River is the only permanent watercourse. There are 10 water protection areas within the Eyre Peninsula.

8.3.4 Water is predominantly sourced from underground resources in the Southern Basins Prescribed Wells Area (PWA) and supplemented with water from the River Murray. Extraction is controlled by licences issued in accordance with the Water Allocation Plans (WAPs) developed for each prescribed water resource in the area under the Natural Resources Management Act 2004. The aquifers located along the western and southern coasts are quite shallow and vulnerable to damage by inappropriate development, low rainfall and seawater incursions.

8.3.5 The Musgrave PWA (Polda Basin) is not in use due to low water levels and associated salinity issues with the Tod Reservoir maintained by SA Water as a back-up emergency source. Individual rainwater collection also contributes to regional supply.

8.3.6 Demand for potable water in the region is expected to exceed supply within 10 years if no mitigating action is taken. Development of alternative water supplies to improve resource security is vital. Desalination plants for private and public use are being considered and developed at various sites across the region.

8.3.7 Ongoing investment in community water schemes and domestic water harvesting will be important to the Eyre Peninsula's water supply. Treated water from community waste management schemes (CWMS) has been introduced in a number towns in the region including Whyalla, Port Lincoln, Ceduna, Thevenard, Smoky Bay, Streaky Bay, Wudinna, Kimba, Cleve, Coffin Bay, Cummins and Tumby Bay.

8.3.8 Water networks: SA Water operates and maintains the regional water system. The primary water supply is sourced from a series of underground basins in southern Eyre Peninsula, supplemented by limited supplies from the Murray River. There are two separate water supply systems.

- Whyalla and Iron Knob are supplied with River Murray water via the Morgan-Whyalla pipeline.

- The Lower Eyre Peninsula and western parts of the region (Port Lincoln, Ceduna and Cleve) are supplied via the Tod-Ceduna pipeline from groundwater basins. Branch lines provide water to other towns.

8.3.9 A pipeline between Kimba and Iron Knob connects the region to the State's mains water distribution network supplementing the Tod-Ceduna system with an additional 1.4GL of water from the River Murray.

8.3.10 Wastewater treatment plants (WWTP):

- Port Lincoln WWTP
- Whyalla WWTP

SA Water – Water and Wastewater System Data	
Towns serviced	37
Area of SA Water's region	64,739 square kilometres
Water mains	3139 kilometres
Wastewater mains	132 kilometres
Reservoirs	2
Water Tanks	82
Pumping Stations	29
Well pump bores	54
Wastewater Treatment Plants	2
Water Treatment Plants	0

Table 22 – SA Water and Wastewater System Data

8.4 Power Supply Networks

8.4.1 The Upper Spencer Gulf is the main source of coal fired power generation for South Australia. The Northern Power Station (520MW) and adjacent Playford Station (220MW) are connected to Whyalla via two 275 KV transmission lines.

8.4.2 Eyre Peninsula's power supply is sourced via a single 275kV backbone transmission line that extends from Whyalla to the Yadnarie substation near Cleve. A single circuit 132kV transmission line from Yadnarie supplies Port Lincoln and the lower Eyre Peninsula. Upper central Eyre Peninsula is serviced by a single 132kV transmission line that runs from Yadnarie to a substation at Wudinna. However, western Eyre Peninsula is only supported by a lower voltage 66kV transmission line that runs from the Wudinna substation to Ceduna and Penong on the far west coast.

8.4.3 The rest of the network across the region is provided by ETSA Utilities and includes 66kV, 32kV and 11kV distribution systems. The distribution networks are extensive and service most of the communities and farming enterprises in the region. The lines have a total route length of 263km and are built using steel towers and single circuit conductor arrangements.

8.4.4 Due to the extensive distances, two diesel turbine generator systems are located at Port Lincoln and are operated by Synergen, providing the region with the capacity of a backup system in the event that the transmission network fails.

(Source: ElectraNet Annual Planning Review 2009-2029, May 2009)

8.5 Gas Supply Networks

8.5.1 Natural gas is supplied to the Eyre Peninsula region from the Moomba to Adelaide pipeline via a lateral line diverted to Whyalla under the Spencer Gulf. OneSteel is the main user of the gas, which also supplies homes and other businesses in Whyalla. The wider Eyre Peninsula is not connected to the gas pipeline and is reliant on bottled gas supply.

8.6 Transport: Road, Rail, Sea and Air links

8.6.1 Extensive infrastructure includes four of the state's nine major export ports, three major regional airports and connections to the national road and rail networks.

8.6.2 The region's main transport infrastructure consists of a network of state and local roads along with passenger airports and port facilities at Ceduna, Port Lincoln and Whyalla. The road network is supplemented by a rail network that for decades has played a major role in the transportation of grain and gypsum to export facilities.

8.7 Road Network

8.7.1 National Highway 1 (Eyre Highway) is the major east-west road across Australia, traversing Eyre Peninsula from Port Augusta to the WA/SA border. Along the eastern coast of Eyre Peninsula is the Lincoln Highway servicing the Spencer Gulf towns between Whyalla and Port Lincoln. The Flinders Highway connects Port Lincoln with Ceduna, servicing coastal townships along the west of the peninsula. Running north-south between Port Lincoln and the Eyre Highway at Kyancutta is the Tod Highway, servicing towns in central Eyre Peninsula. These four highways are maintained by the State Government Department of Planning, Transport and Infrastructure.

8.7.2 In addition to the highways, the region has a network of local roads that is managed by District Councils. This network comprises 12,742 kilometres of road with 94.9% unsealed. The eleven member Councils of the Eyre Peninsula Local Government Association collaborate to develop a strategic regional roads plan which is supported by the Special Local Roads Program.

8.7.3 Most freight movements in the region are undertaken by road. The freight demand comes from business, social and government needs with consumer freight mostly using Highway 1 from Adelaide. General freight is typically moved throughout the region in articulated vehicles or smaller vans on a daily basis, primarily using the region's highway system. The heavy freight task is significant and increasing with substantial potential for change as a result of proposed mining development across the region.

8.7.4 The Eyre peninsula faces considerable financial and logistical challenges when it comes to the development and maintenance of its infrastructure due to its size, remoteness, diversity and scattered nature of its population.

8.7.5 Transportation to and from wharf facilities is mainly undertaken via the road network (with the exception gypsum which is totally hauled by rail from Kevin to Thevenard). Grain freight is moved primarily by road, despite an upgrade of the railway. De-regulation of wheat marketing in 2008 has seen new marketers operating in the region and diversity in freight movements. However, the price differential has meant that many farmers continue to rely on road freight over rail.

8.7.6 Updated annual average daily traffic estimates and commercial vehicle traffic volumes on major roads have been collated from DPTI and are shown at the end of this document.

8.7.7 Commodity routes are gazetted for grain, fertiliser, hay and bulk stock feed, dairy milk, wine, wool, livestock, logging and timber and fruit and vegetables, for both B Double and Road Train vehicles. Details of the routes for each of the above including any existing restrictions are maintained on the DPTI Ravnet site at http://www.dpti.sa.gov.au/ravnet.

8.8 Rail Infrastructure

8.8.1 The Eyre Peninsula railway system is an aged narrow gauge railway line that is not connected to the national standard gauge network. A privately owned and operated narrow-gauge rail system services the ports of Port Lincoln and Thevenard and major centres including Wudinna, Cummins and Kimba. It links the Port of Thevenard in the west to Port Lincoln in the south, and is only operational between Port Lincoln and Wudinna. A branch line extends from the centre of lower Eyre Peninsula through Rudall and Kimba to Buckleboo on the upper eastern side of the Peninsula. These links are currently used exclusively to carry grain to Port Lincoln. A line from Thevenard to Kevin (near Penong) west of Ceduna is used for hauling gypsum to Thevenard.

8.8.2 **Intrastate rail network[13]:** SA's intrastate rail networks are owned and managed by Genesee and Wyoming Australia (GWA). GWA is based in Adelaide and operates approximately 1,290km of track and civil infrastructure in SA. Its main activities in the State are providing haulage of bulk commodities, notably grain, steel, gypsum and mineral sands, and short haul shunting and terminal operations. Its lines are mainly located in the Eyre Peninsula, Murraylands and the Mid-North. Narrow gauge lines on the Eyre Peninsula, includes 500km of operational and 275km of dormant lines.

8.8.3 The land on which GWA operates is owned by the SA Government and leased to the company. GWA owns the above ground rail infrastructure and rolling stock. GWA also operates on ARTC standard gauge track and the TransAdelaide broad gauge metropolitan rail network, as well as OneSteel's Whyalla network. Genessee & Wyoming Australia owns the rail infrastructure and rolling stock on the Eyre Peninsula, and operates all rail services.

8.8.4 **OneSteel (iron ore rail haulage line at Whyalla)** - OneSteel is the owner of the Whyalla steelworks and is the owner of an 80km rail line between the Whyalla steelworks and its iron ore mines. OneSteel completed an upgrade of its rail system in 2006,73 with an expectation that the Whyalla Steelworks will continue operation until 2027.74 GWA is the contracted service operator for the railway.75 Transfield Services provides maintenance services and capital works for railway civil, track and signals infrastructure within the OneSteel, Whyalla Steelworks and rail tracks running from the iron ore mines to the steelworks.

[13] Infrastructure Report Card 2010 South Australia
http://www.engineersaustralia.org.au/sites/default/files/shado/Infrastructure%20Report%20Cards/SA/Complete_report_sa.pdf

8.8.5 **Interstate Network[14]:** The standard gauge interstate network (known as the Defined Interstate Rail Network (DIRN)) is managed by the Australian Rail Track Corporation (ARTC). The ARTC is a company with shares owned by the Australian Government and manages over 10,000 route kilometres of standard gauge interstate track in SA, Victoria, Western Australia and New South Wales.

8.8.6 The SA component of the DIRN consists of the following rail sections in the Eyre and Western Zone:

- Adelaide via Port Augusta to Kalgoorlie on the Adelaide – Perth Corridor
- Port Augusta to Whyalla spur on the Adelaide – Perth Corridor

8.8.7 The ARTC is generally responsible for capital investment in the corridors, management of infrastructure maintenance, and selling access to train operators. These lines predominantly carry freight but are also used by a few interstate passenger services. Figure 44 identifies the interstate network.

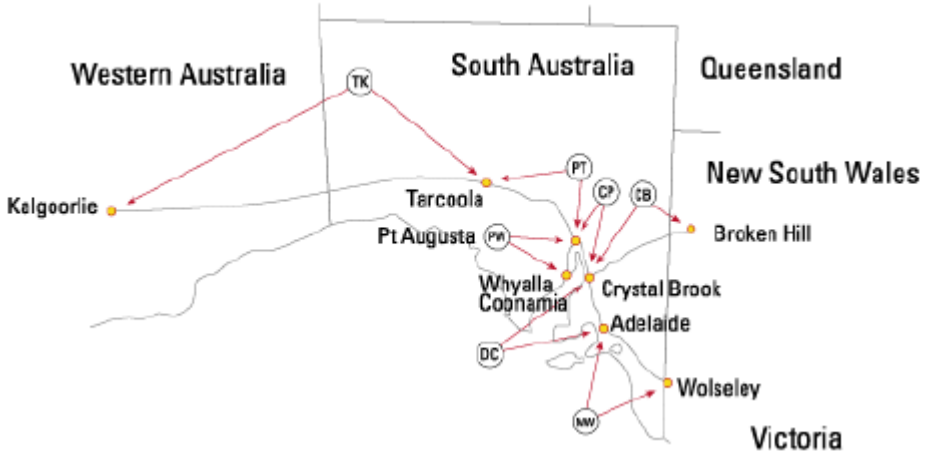


Figure 44 – Components of the interstate rail network

8.8.8 Figure 45 identifies the SA rail networks and their owners.

[14] Infrastructure Report Card 2010 South Australia
http://www.engineersaustralia.org.au/sites/default/files/shado/Infrastructure%20Report%20Cards/SA/Complete_report_sa.pdf



Figure 45 – South Australia's Rail Networks and their owners

8.9 Sea Ports

8.9.1 Before 2001, the State-owned SA Ports Corporation owned a number of ports in the State. These were privatised, with Flinders Ports Pty Limited acquiring the port infrastructure at Port Adelaide, Port Lincoln, Thevenard, Port Giles, Port Pirie, Wallaroo and Klein Point. Flinders Ports also acquired a 99 year lease over the port and associated land, and an operating licence for these ports.

8.9.2 South Australia's port infrastructure consists of ten commercial sea ports, Eyre Peninsula has 4 major sea ports located at Port Lincoln, Port Bonython (Santos), Thevenard (Ceduna) and Whyalla (Onesteel). The Arrium Port at Whyalla has been expanded since mid-2013, to double the Port capacity to 12 million tonnes per annum.

This additional volume is being transported via rail.[15] The location of SA's commercial ports is illustrated in the Fig 46.[16]

8.9.3 **Port Lincoln Sea Port** is situated on the southern tip of the Eyre Peninsula and is 652km by road from Adelaide. The port's main export is grain and its main imports are petroleum products and fertilisers. Port Lincoln is a natural deepwater harbour. According to the Infrastructure report card for South Australia, the key challenges facing the port include:

- Insufficient area for mineral storage near the wharf
- Ageing rail infrastructure
- Grain deliveries causing traffic problems through the city and at the wharf
- Difficulty in maintaining efficient grain delivery using long grain trains
- Inadequate rail unloading areas
- Concern over contamination risks to grain from minerals at the port
- Conflicts between port operations and adjacent residential growth
- Tension between commercial port operations and fishing industry needs

8.9.4 **Thevenard** - The port of Thevenard is located beside the town of Ceduna in the West Coast region, 793km west of Adelaide. Thevenard is a bulk port that primarily exports gypsum, mineral sands, salt and grain. Nearly 2 million tonnes of cargo was exported from Thevenard in the 2008/09 financial year, making it the second largest multi-user port in SA. Key challenges facing the port include:

- Ageing rail infrastructure and the need to maintain the existing rail line to sustain existing gypsum volumes over time
- Limited mineral sands storage
- Concern over contamination risks to grain from minerals at the port
- Tension between commercial port operations and fishing industry needs
- Limited channel draft of 8.2m
- Limited ship loader reach.

8.9.5 **Whyalla Port** - The port at Whyalla is operated by OneSteel and is located in the city of Whyalla on the eastern shore of the Eyre Peninsula. The port is used for the export of a variety of iron products. This port includes a bulk-loading barge trans-shipment operation. The port is an indentured port, giving OneSteel exclusive use.

8.9.6 **Port Bonython** - The port at Port Bonython handles the export of petroleum products, principally LPG and crude oil from the Cooper Basin. It has a 2.4 kilometre jetty. The existing port infrastructure cannot be used for bulk commodities, such as iron ore.

8.9.7 A significant component of SA's port cargo is destined for overseas markets. During 2008/09, exports increased in volume by 22% to 12.5 million tonnes, but decreased in value by 7% to $8.9 billion. China was SA's largest export market by volume and this is principally iron ore exports.

8.9.8 Currently, SA does not have any bulk loading facilities for iron ore except for OneSteel's privately operated loading facility at Whyalla, which is unavailable to third parties.184 There are five ports, Port Adelaide, Whyalla, Port Lincoln, Port Giles and Wallaroo, which are capable of handling Panamax ships. Port Giles and Wallaroo are not suitable for large scale volume as they are only accessed by road. Port Lincoln does not have a rail connection to the north of the State meaning the northern mines cannot access it. Mining companies active on the Eyre Peninsula have proposed a number of new deep-water ports for which they will provide the capital funding. Some proposals include:

- A multi-user facility at Port Bonython
- A multi-user deep sea-water port at Sheep Hill (near Tumby Bay), 70km north of Port Lincoln funded by Centrex Metals; and
- Deep sea-water port at Cape Hardy near Tumby Bay and Port Neill funded by Iron Road.

8.9.9 Ferry service located at Lucky Bay (to Wallaroo) - National highways link the region to Western Australia, the Northern Territory, the eastern states and Adelaide. The recently completed Lucky Bay terminal and ferry service provides an alternative route for vehicles between Lucky Bay, near Cowell, and Wallaroo on Yorke Peninsula.

[15] Eyre Peninsula Local Government Association 2015 Regional Transport Strategy, http://www.lga.sa.gov.au/webdata/resources/files/2013.13%20-%20LGA%20Overarching%20Regional%20Transport%20Strategy%20-%20Jan%202015.pdf

[16] Infrastructure Report Card 2010 South Australia
http://www.engineersaustralia.org.au/sites/default/files/shado/Infrastructure%20Report%20Cards/SA/Complete_report_sa.pdf



Figure 46 – South Australia's Commercial Ports

8.10 Airports

8.10.1 Airport infrastructure consists of fixed assets on airport land, including runways, terminals, buildings (ie. aeronautical and non-aeronautical industrial, commercial and retail buildings), roads, drainage systems and fencing.

8.10.2 In SA, there are over 400 airports and airstrips. These can be divided into the following categories:

- One international and major domestic airport – Adelaide Airport
- One major general aviation airport – Parafield Airport
- Ten regional airports with scheduled passenger services – Ceduna, Challenger, Coober Pedy, Kingscote on Kangaroo Island, Mount Gambier, Olympic Dam, Port Augusta, Port Lincoln, Prominent Hill and Whyalla
- Minor airports and airstrips.

8.10.3 South Australia's eight regional airports are all owned and managed by local government, except for Olympic Dam which is privately owned. The region's three main airports are located at Port Lincoln, Whyalla and Ceduna and are licensed by the Civil Aviation Safety Authority. The facilities are owned and operated by local government – the City of Whyalla, District Council of Ceduna and the District Council of Lower Eyre Peninsula (for Port Lincoln Airport). The airports provide facilities and services for regular passenger transport (RPT), charters, defence aircraft, medical retrieval services (the Royal Flying Doctor Service) and general aviation operations.

8.10.4 Port Lincoln is South Australia's busiest regional airport, with in excess of 190,000 passengers annually. Whyalla's passengers' number 60,000 per annum and Ceduna passenger numbers have grown to approximately 25,000 per annum.

8.10.5 Other Eyre and Western regional airports can be classified into the two groups of:

- **Registered airports** – sealed runway strips with pilot activated lights at Wudinna, Streaky Bay and Cleve**.**
- **Authorised Landing Areas** - These are normally airstrips with no facilities and are designed for emergency services such as the Royal Doctor Flying Service.

8.10.6 Airport passenger numbers to Port Lincoln, Whyalla and Ceduna have grown at 6.7% per annum over the last ten years (South Australia: 5.1%) through a combination of domestic tourism demand, workforce growth and industry visitations. Table 23 identifies the passenger statistics for South Australia's major airports in the last four years.[17]

Airport	2005/06	2006/07	2007/08	2008/09	Average yearly growth 2005/06 to 2008/09 (%)
Adelaide	5,766,504	6,181,390	6,619,267	6,784,137	6%
Ceduna	17,287	20,677	23,827	24,899	15%
Coober Pedy	8,465	10,548	10,345	9,744	5%
Kingscote	60,252	59,155	63,985	59,587	0%
Mount Gambier	102,121	109,435	115,365	98,247	-1%
Olympic Dam	37,112	57,639	74,099	76,118	35%
Port Augusta	3,953	4,987	4,690	9,104	43%
Port Lincoln	138,547	138,844	149,544	148,435	2%
Whyalla	64,546	76,091	79,425	68,087	2%

Table 23 – Passenger statistics for South Australia's airports (total revenue passengers)

8.11 Telecommunication Services

8.11.1 Government Radio Network (GRN) and private carriers.

8.11.2 Mobile phone coverage extends across most of the region via the Telstra Next G network, giving broad and efficient phone coverage to most rural townships but not to areas outside townships in the northern area. Other phone network providers (Optus and Vodafone) have expanded their service coverage and offer service alternatives with Optus providing the best coverage outside townships in the northern area.

8.11.3 Information and Communications Technology (ICT) services in the region are limited. Most rural communities with a population of more than 500 have mobile phone coverage. Most populated areas are connected by optical fibre, but only Whyalla, Port Lincoln and Ceduna have access to ADSL broadband capable of carrying large volumes of data efficiently, effectively and affordably. ADSL services in other towns are only available through Telstra or resold Telstra wholesale services by other providers. However mobile broadband is inconsistent and non-existent in some areas.

8.11.4 Video conferencing facilities are available through schools, remote indigenous centres, TAFE campuses and hospitals. In addition a number of Eyre Peninsula councils are providing video conferencing facilities to community groups and local organisations.

8.11.5 The National Broadband Network has identified it will deliver fibre-to-the-premises in towns such as Whyalla, Port Lincoln, Kimba, Cleve, Cowell, Tumby Bay and Ceduna. Other towns will receive wireless or next generation satellite services.

8.11.6 ICT Services – State and Local Government Services and private systems

[17] Infrastructure Report Card 2010 South Australia
http://www.engineersaustralia.org.au/sites/default/files/shado/Infrastructure%20Report%20Cards/SA/Complete_report_sa.pdf

8.12 Community

- Health: Hospitals Public and private –
- Local Government offices
- Transportation – Roads, sea and air links
- Fuel supply and distribution network
- Food supply and distribution network
- ICT Services – Banking, Retail, Fuel etc,

9 Hazardous Sites

9.1.1 When considering hazardous sites, both static and transported goods need to be considered. Some examples of hazardous sites in the Zone include bulk storage of chemicals used for agriculture, fuel storage and fertilisers.

9.1.2 Local arrangements or protocols are supported by state level arrangements in relation to these issues.

9.1.3 Hazardous Material Sites Identified by SafeWork SA in the Eyre and Western Zone:

- Ceduna – 1
- Cleve - 1
- Cummins – 2
- Kimba – 1
- Port Lincoln – 5
- Rudall – 3
- Thevenard - 1
- Tumby Bay – 1
- Whyalla – 1
- Wudinna – 1

Registers

The following registers have been included at the request of the Eyre and Western ZEMC. The Committee found that this information was not readily available in a summarised format elsewhere.

1. **Register of Educational Facilities**

The information contained in this register was collated from DECD (http://www.decd.sa.gov.au/locs/ ; http://www.ais.sa.edu.au/) and the Australian Schools Directory (http://www.australianschoolsdirectory.com.au/adelaide-schools.php).

Name*	Town	Council	Type
Koonibba Aboriginal School	Koonibba	Ceduna	Aboriginal/Anangu Schools
Oak Valley Aboriginal School	Oak Valley	Ceduna, Unincorporated SA	Aboriginal/Anangu Schools
Yalata Anangu School	Yalata	Ceduna, Unincorporated SA	Aboriginal/Anangu Schools
Pt Lincoln Learning Together@Home	Port Lincoln	Port Lincoln	Learning Together@Home
Whyalla Learning Together @ Home	Whyalla Norrie	Whyalla	Learning Together@Home
Ceduna Community Children's Centre	Ceduna	Ceduna	Child Care Centres
Goodstart EL Whyalla	Whyalla	Whyalla	Child Care Centres
Kiddywinks Child Care Centre	Port Lincoln	Port Lincoln	Child Care Centres
Port Lincoln Children's Centre CCC	Port Lincoln	Port Lincoln	Child Care Centres
TAFE SA - Whyalla Campus CCC	Whyalla Norrie	Whyalla	Child Care Centres
TAFE SA Tiny TAFE CC Pt Lincoln	Port Lincoln	Port Lincoln	Child Care Centres
Toy Box Community CCC	Port Lincoln	Port Lincoln	Child Care Centres
Whyalla Child Care Centre	Whyalla Norrie	Whyalla	Child Care Centres
Port Lincoln Family Day Care	Port Lincoln	Port Lincoln	Family Day Care Schemes
Whyalla Family Day Care	Whyalla	Whyalla	Family Day Care Schemes
Wudinna Family Day Care	Wudinna	Wudinna	Family Day Care Schemes
Gabmididi Manoo Childrn & Family Ctr	Whyalla Norrie	Whyalla	Integrated Centres
Kirton Point Children's Centre	Port Lincoln	Port Lincoln	Integrated Centres
Minya Bunhii Child Care & Kgtn	Ceduna	Ceduna	Integrated Centres
Ngura Yadurirn Child & Family Centre	Ceduna	Ceduna	Integrated Centres
Port Lincoln Children's Centre	Port Lincoln	Port Lincoln	Integrated Centres
Davison Street Occasional Care	Whyalla Norrie	Whyalla	Occasional Care
Kimba Community Kgtn Occ Care	Kimba	Kimba	Occasional Care
Kirton Point Children's Ctr Occ Care	Port Lincoln	Port Lincoln	Occasional Care
McRitchie Crescent Occasional Care	Whyalla Norrie	Whyalla	Occasional Care

Ngura Yadurirn Occassional Care	Ceduna	Ceduna	Occasional Care
Norrie Stuart Occasional Care	Whyalla Norrie	Whyalla	Occasional Care
Streaky Bay Children's Ctr Occ Care	Streaky Bay	Streaky Bay	Occasional Care
Whyalla Stuart Kgtn Occasional Care	Whyalla Stuart	Whyalla	Occasional Care
Wudinna Occasional Care	Wudinna	Wudinna	Occasional Care
Ceduna Comm Chn's Ctr OSHC/Vac	Ceduna	Ceduna	Out of School Hours Care
Gidja Club Vacation Care	Port Lincoln	Port Lincoln	Out of School Hours Care
Memorial Oval PS OSHC/VAC	Whyalla	Whyalla	Out of School Hours Care
Nicolson Avenue PS OSHC/Vac	Whyalla Norrie	Whyalla	Out of School Hours Care
Port Lincoln OSHC - YMCA	Port Lincoln	Port Lincoln	Out of School Hours Care
Samaritan College OSHC/Vac	Whyalla Stuart	Whyalla	Out of School Hours Care
Streaky Bay Area School Vac Care	Streaky Bay	Streaky Bay	Out of School Hours Care
Tumby Bay AS OSHC/Vac	Tumby Bay	Tumby Bay	Out of School Hours Care
Whyalla Town PS OSHC/Vac	Whyalla	Whyalla	Out of School Hours Care
Arno Bay Playcentre	Arno Bay	Cleve	Playcentres
Darke Peak Playcentre	Darke Peak	Cleve	Playcentres
Karkoo Playcentre	Cummins	Lower Eyre Peninsula	Playcentres
Port Neill Playcentre	Port Neill	Tumby Bay	Playcentres
Ungarra Playcentre	Ungarra	Tumby Bay	Playcentres
Bishop Kindergarten	Port Lincoln	Port Lincoln	Preschools
Cleve District Children's Centre	Cleve	Cleve	Preschools
Cowell Early Childhood Centre	Cowell	Franklin Harbor	Preschools
Cranston Street Kindergarten	Port Lincoln	Port Lincoln	Preschools
Cummins Child Parent Centre	Cummins	Lower Eyre Peninsula	Preschools
Elliston RSL Memorial CC	Elliston	Elliston	Preschools
Karcultaby Preschool	Karcultaby	Streaky Bay	Preschools
Kimba Community Kindergarten	Kimba	Kimba	Preschools
Koonibba Child Parent Centre	Koonibba	Ceduna	Preschools
Lake Wangary Preschool Centre	Wangary	Lower Eyre Peninsula	Preschools
Lock Early Learning Centre	Lock	Elliston	Preschools
McRitchie Crescent Chn Servs Ctr	Whyalla Stuart	Whyalla	Preschools
Miltaburra Children's Centre	Wirrulla	Streaky Bay	Preschools
Neta Kranz Children's Centre	Whyalla	Whyalla	Preschools
Norrie Stuart Childhood Servs Ctr	Whyalla Norrie	Whyalla	Preschools
Oak Valley Aboriginal School CPC	Oak Valley	Ceduna Unincorporated SA	Preschools

Penong Preschool	Penong	Ceduna Unincorporated SA	Preschools
Poonindie Early Childhood Centre	Poonindie	Lower Eyre Peninsula	Preschools
Streaky Bay Children's Centre	Streaky Bay	Streaky Bay	Preschools
Tumby Bay Kindergarten	Tumby Bay	Tumby Bay	Preschools
Whyalla Stuart Early Chlhd Ctr Kgtn	Whyalla Stuart	Whyalla	Preschools
Win Newby Kindergarten	Whyalla Norrie	Whyalla	Preschools
Wudinna RSL Memorial Kindergarten	Wudinna	Wudinna	Preschools
Yalata Child Parent Centre	Yalata	Ceduna Unincorporated SA	Preschools
Coorabie RS-Annexe of Penong PS	Coorabie	Ceduna Unincorporated SA	Primary School
Fisk Street Primary School	Whyalla Norrie	Whyalla	Primary School
Hincks Avenue Primary School	Whyalla Norrie	Whyalla	Primary School
Kirton Point Primary School	Port Lincoln	Port Lincoln	Primary School
Lake Wangary Primary School	Wangary	Lower Eyre Peninsula	Primary School
Lincoln Gardens Primary School	Port Lincoln	Port Lincoln	Primary School
Long Street Primary School	Whyalla Norrie	Whyalla	Primary School
Memorial Oval Primary School	Whyalla	Whyalla	Primary School
Nicolson Avenue Primary School	Whyalla Norrie	Whyalla	Primary School
Penong Primary School	Penong	Ceduna Unincorporated SA	Primary School
Poonindie Community Learning Centre	Port Lincoln	Port Lincoln	Primary School
Port Kenny Primary School	Port Kenny	Elliston	Primary School
Port Lincoln Junior Primary School	Port Lincoln	Port Lincoln	Primary School
Port Lincoln Primary School	Port Lincoln	Port Lincoln	Primary School
Port Neill Primary School	Port Neill	Tumby Bay	Primary School
Ungarra Primary School	Ungarra	Tumby Bay	Primary School
Whyalla Stuart Campus R-7	Whyalla Stuart	Whyalla	Primary School
Whyalla Town Primary School	Whyalla	Whyalla	Primary School
Ceduna Area School	Ceduna	Ceduna	Primary/Secondary Combined
Cleve Area School	Cleve	Cleve	Primary/Secondary Combined
Cowell Area School	Cowell	Franklin Harbor	Primary/Secondary Combined
Cummins Area School	Cummins	Lower Eyre Peninsula	Primary/Secondary Combined
Elliston Area School	Elliston	Elliston	Primary/Secondary Combined
Karcultaby Area School	Karcultaby, Minnipa	Streaky Bay	Primary/Secondary Combined
Kimba Area School	Kimba	Kimba	Primary/Secondary Combined
Lock Area School	Lock	Elliston	Primary/Secondary Combined
Miltaburra Area School	Wirrulla	Streaky Bay	Primary/Secondary Combined
Streaky Bay Area School	Streaky Bay	Streaky Bay	Primary/Secondary Combined

Tumby Bay Area School	Tumby Bay	Tumby Bay	Primary/Secondary Combined
Wudinna Area School	Wudinna	Wudinna	Primary/Secondary Combined
Cleve Rural Care	Cleve	Cleve	Rural Care Program
Cowell Rural Care	Cowell	Franklin Harbor	Rural Care Program
Cummins Rural Care	Cummins	Lower Eyre Peninsula	Rural Care Program
Tumby Bay Rural Care	Tumby Bay	Tumby Bay	Rural Care Program
Edward John Eyre High School	Whyalla Norrie	Whyalla	Secondary Education
Port Lincoln High School	Port Lincoln	Port Lincoln	Secondary Education
Stuart High School	Whyalla Stuart	Whyalla	Secondary Education
Whyalla High School	Whyalla	Whyalla	Secondary Education
Port Lincoln Special School	Port Lincoln	Port Lincoln	Special Education
Whyalla Special Education Centre	Whyalla Norrie	Whyalla	Special Education

2. Register of Aged Care Facilities

The information contained in this register was collated from My Aged Care (http://www.myagedcare.gov.au/service-finders?finder=aged-care-homes#tab-1) and the Aged Care Guide (http://www.agedcareguide.com.au/residential.asp?acatid=694&stateid=5)

Facilities	Location	Total Beds
Ceduna District Health Service	Ceduna SA	39
Eastern Eyre Health & Aged Care Cleve	Cleve SA	35
Eastern Eyre Health & Aged Care Cowell	Cowell SA	24
Cummins Hospital & Health Service	Cummins SA	22
Mid West Health Elliston	Elliston SA	15
Eastern Eyre Health & Aged Care Kimba	Kimba SA	22
Matthew Flinders Home	Port Lincoln SA	68
Pioneer Village	Port Lincoln SA	74
Mid West Health Elmhaven	Streaky Bay SA	15
Seaview Village Flexible Aboriginal Aged Care	Thevenard SA	12
Lower Eyre Health Services Tumby Bay	Tumby Bay SA	22
Annie Lockwood Court Hostel	Whyalla SA	51
Yeltana Nursing Home	Whyalla SA	58
Copperhouse Court Hostel	Whyalla Stuart SA	42
Mid West Health Service Wudinna	Wudinna SA	10

3. Register of Objects of Significance

The information contained in this register was collected from the South Australian Heritage Places Database (http://apps.planning.sa.gov.au/HeritageSearch/HeritageSearchLocation.aspx)

Details	Address	LGA	Source
Koonalda Cave	Old Eyre Highway COOK	Ceduna	National Heritage Trust
Our Redeemer Lutheran Church of the former Koonibba Lutheran Mission	Mickey Free Lawrie Drive KOONIBBA VIA CEDUNA	Ceduna	State
Point Collinson Whaling Station Site	SMOKY BAY	Ceduna	State
Former McKenzie's Landing, within Murat Bay	Due South of Part Block 1 DENIAL BAY VIA CEDUNA	Ceduna; Unincorporated SA	State
Dwelling ('Yeldulknie Cottage')	Off Cleve Road, near CLEVE	Cleve	State
JC Darke Memorial & Grave	Near DARKE PEAK	Cleve	State

Sims Farm Homestead	Cleve - Cowell Road CLEVE	Cleve	State
Yeldulknie Weir	Off Cleve Road, near CLEVE	Cleve	State
Cast Iron Lead Light	Off Flinders Highway ELLISTON	Elliston	State
Elliston CWA (Country Women's Association) Rest Rooms	9 Memorial Drive ELLISTON	Elliston	State
Elliston Jetty	Off Flinders Highway ELLISTON	Elliston	State
Flinders Island Whaling & Sealing Site	FLINDERS ISLAND VIA ELLISTON	Elliston	State
Oaklands Shearing Shed	Flinders Highway ELLISTON	Elliston	State
Round Lake Washing Pool	Off Sheringa - Sheringa Beach Road SHERINGA VIA PORT LINCOLN	Elliston	State
Franklin Harbor Hotel	53 Main Street COWELL	Franklin Harbour	State
Cunyarie Rocks (Emu Rocks) Water Supply Structure	Near CUNYARIE VIA KIMBA	Kimba	State
Refuge Rockholes Historic Reserve (Secret Rocks)	Whyalla Road KIMBA	Kimba	State
Stables, Shed & Yards	Near Wirrigenda Hill KIMBA	Kimba	State
Dwelling ('Boston House')	Lincoln Highway BOSTON	Lower Eyre Peninsula	State
Flinders Monument, Stamford Hill, Lincoln National Park	Stamford Hill, Lincoln National Park LINCOLN NATIONAL PARK	Lower Eyre Peninsula	State
Former Bakehouse Complex & Well, former Poonindie Mission	Lincoln Highway POONINDIE VIA PORT LINCOLN	Lower Eyre Peninsula	State
Former Coffin Bay Whaling Site (designated place of archaeological significance) Coffin Bay National Park	COFFIN BAY	Lower Eyre Peninsula	State
Former CW Schuermann's Mission Site (Lutheran)	Lincoln Highway NORTH SHIELDS	Lower Eyre Peninsula	State
Former Fishery Bay Whaling Station	Near SLEAFORD BAY VIA PORT LINCOLN	Lower Eyre Peninsula	State
Former Lake Hamilton Eating House	Flinders Highway LAKE HAMILTON VIA PORT LINCOLN	Lower Eyre Peninsula	State
Former Poonindie Mission Cemetery	Lincoln Highway POONINDIE VIA PORT LINCOLN	Lower Eyre Peninsula	State
Former Schoolhouse (supposed), former Poonindie Mission	Lincoln Highway POONINDIE VIA PORT LINCOLN	Lower Eyre Peninsula	State
Former Superintendent's Residence, former Poonindie Mission	Lincoln Highway POONINDIE VIA PORT LINCOLN	Lower Eyre Peninsula	State
Lake Hamilton Homestead Complex including Homestead, Drafting Yards, Shearing Shed, Cemetery, Outbuildings, Mess Hut and Store (ruin)	Flinders Highway, Via MOUNT HOPE	Lower Eyre Peninsula	State
Memory Cove Tablet Site, Memory Cove Wilderness Protection Area	LINCOLN NATIONAL PARK	Lower Eyre Peninsula	State
Mount Dutton Bay Woolshed	Lot 874 Woolshed Drive MOUNT DUTTON BAY	Lower Eyre Peninsula	State

St Matthew's Anglican Church, former Poonindie Mission	Lincoln Highway POONINDIE VIA PORT LINCOLN	Lower Eyre Peninsula	State
Tod Reservoir	Off White Flat - Koppio Road WHITE FLAT VIA PORT LINCOLN	Lower Eyre Peninsula	State
Mount Dutton Bay Jetty	Lot 10 Woolshed Drive MOUNT DUTTON BAY	Lower Eyre Peninsula; Unincorporated SA	State
'Arrandale' (Dwelling, Cottage and Stables)	152 Proper Bay Road PORT LINCOLN	Port Lincoln	State
Dwelling ('Ravendale House')	20 Windsor Avenue PORT LINCOLN	Port Lincoln	State
Former Windmill Base (sometime Pioneer Mill Museum)	Dorset Place PORT LINCOLN	Port Lincoln	State
Hawson's Grave, Hawson Square	Hawson Place PORT LINCOLN	Port Lincoln	State
Port Lincoln Police Station & Courthouse	36 Washington Street PORT LINCOLN	Port Lincoln	State
Port Lincoln Railway Station	Railway Terrace PORT LINCOLN	Port Lincoln	State
Eyre's Waterhole (former Cooeyana Well)	Flinders Highway, Near STREAKY BAY	Streaky Bay	State
Kirkala Station Site, including the Homestead, School (sometime Shearers' Dining Room), Stables, Blacksmith's Shop and Cottage	Poochera Road STREAKY BAY	Streaky Bay	State
Kirkala Station, Outstation, including Two-Roomed Cottage, External Bakehouse and Underground Tank	Poochera Road STREAKY BAY	Streaky Bay	State
Maryvale (including Homestead, School, Shearing Shed & Quarters)	STREAKY BAY	Streaky Bay	State
Murphy's Haystacks Geological Site	Benbarber Road off Flinders Highway MORTANA VIA PORT KENNY	Streaky Bay	State
Tumby Bay Hotel	1 North Terrace TUMBY BAY	Tumby Bay	State
Water Tank, Moody Rocks, Moody Tank Conservation Park	Yeelana Road UNGARRA	Tumby Bay	State
Bay View Hotel	13 Forsyth Street WHYALLA	Whyalla	State
Dwelling - Gay Street Cottage (Relocated to the Mount Laura Homestead Museum Reserve in 1978)	Ekblom Street WHYALLA NORRIE	Whyalla	State
Former Wooden Lock-up from Whyalla Policeman's Dwelling (Relocated to the Mount Laura Homestead Museum Reserve in 1978)	Ekblom Street WHYALLA NORRIE	Whyalla	State
Point Lowly Lighthouse Complex (including Lighthouse, Reserve Land of 2.14 Hectares, Power House, Two Keepers' Cottages, Oil Store, and Signal Flag Mast)	POINT LOWLY VIA WHYALLA	Whyalla	State
Spencer Hotel	5 Forsyth Street WHYALLA	Whyalla	State
Whyalla Court House	3 Whitehead Street WHYALLA	Whyalla	State

Whyalla High School (former Whyalla Technical High School)	Broadbent Terrace WHYALLA	Whyalla	State
World War Two Gun Emplacements, Hummock Hill	Gay Street WHYALLA	Whyalla	State
Mount Wudinna & Environs (Mount Wudinna, Little Wudinna, Polda Rock and Turtle Rock) (designated place of geological significance)	WUDINNA	Wudinna	State
Pildappa Rock (designated place of geological significance)	Pildappa Road MINNIPA	Wudinna	State
Ucontitchie Hill (designated place of geological significance)	WUDINNA	Wudinna	State
Yarwondutta Rock and Quarry (designated a place of geological significance)	Yardea Road MINNIPA	Wudinna	State
Yarwondutta Rock Tank	Yardea Road MINNIPA	Wudinna	State

4. Register of Threatened Ecological Communities in Eyre and Western Zone

The information contained in this register was collated from Commonwealth Department of the Environment's Protected Matters Search Tool (http://www.environment.gov.au/epbc/protected-matters-search-tool)

Table 29: Threatened Ecological Communities in Eyre and Western Zone

Name	Status	Type of Presence
Peppermint Box Grassy Woodland of South Australia	Critically Endangered	Community likely to occur within area
Eyre Peninsula Blue Gum Woodland	Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

5. Register of Threatened Species of Birds and Animals in Eyre and Western Zone

The information contained in this register was collated from Commonwealth Department of the Environment's Protected Matters Search Tool (http://www.environment.gov.au/epbc/protected-matters-search-tool)

Table 30: Threatened Species of Birds and Animals in Eyre and Western Zone

BIRDS		
Name	**Status**	**Type of Presence**
Curlew Sandpiper	Critically Endangered	Roosting known to occur within area
Eastern Curlew	Critically Endangered	Roosting known to occur within area
Plains-Wanderer	Critically Endangered	Species or species habitat may occur within area
Northern Royal Albatross	Endangered	Foraging, feeding or related behavior likely to occur within area
Southern Giant Petrel	Endangered	Species or species habitat may occur within area
Night Parrot	Endangered	Extinct within area
Australian Painted Snipe	Endangered	Species or species habitat may occur within area
Painted Snipe	Endangered	Species or species habitat may occur within area
Tristan Albatross	Endangered	Species or species habitat may occur within area
Northern Royal Albatross	Endangered	Foraging, feeding or related behavior likely to occur within area
Southern Giant Petrel	Endangered	Species or species habitat may occur within area

Western Grasswren	Vulnerable	Species or species habitat may occur within area
Southern Royal Albatross	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Antipodean Albatross	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Wandering Albatross	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Blue Petrel	Vulnerable	Species or species habitat known to occur within area
Malleefowl	Vulnerable	Species or species habitat known to occur within area
Northern Giant Petrel	Vulnerable	Species or species habitat known to occur within area
Fairy Prion (Southern)	Vulnerable	Species or species habitat known to occur within area
Sooty Albatross	Vulnerable	Species or species habitat known to occur within area
Western Whipbird (eastern), Mallee Western Whipbird	Vulnerable	Foraging, feeding or related behaviour may occur within area
Soft-plumaged Petrel	Vulnerable	Species or species habitat known to occur within area
Australian Fairy Tern	Vulnerable	Breeding likely to occur within area
Southern Emu-wren (Eyre Peninsula)	Vulnerable	Species or species habitat known to occur within area
Shy Albatross, Tasmanian Shy Albatross	Vulnerable	Foraging, feeding or related behaviour may occur within area
White-capped Albatross	Vulnerable	Foraging, feeding or related behaviour may occur within area
Black-browed Albatross	Vulnerable	Species or species habitat known to occur within area
Campbell Albatross, Campbell Black-browed Albatross	Vulnerable	Species or species habitat known to occur within area
Hooded Plover (eastern)	Vulnerable	Species or species habitat known to occur within area

MAMMALS

Name	Status	Type of Presence
Blue Whale	Endangered	Species or species habitat may occur within area
Woylie	Endangered	Species or species habitat may occur within area
Southern Right Whale	Endangered	Breeding known to occur within area
Sandhill Dunnart	Endangered	Species or species habitat may occur within area
Southern Brown Bandicoot	Vulnerable	Species or species habitat may occur within area
Wopilkara, Greater stick-nest	Vulnerable	Species or species habitat may occur within area
Greater Bilby	Vulnerable	Species or species habitat may occur within area
Humpback Whale	Vulnerable	Species or species habitat may occur within area
Australian Sea-lion	Vulnerable	Breeding known to occur within area
Yellow-footed Rock-wallaby	Vulnerable	Breeding known to occur within area

REPTILES

Name	Status	Type of Presence
Loggerhead Turtle	Endangered	Foraging, feeding or related behaviour likely to occur within area
Leatherback Turtle, Leathery Turtle, Luth	Endangered	Foraging, feeding or related behaviour likely to occur within area
Green Turtle	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

SHARKS		
Name	**Status**	**Type of Presence**
Great White Shark	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

6. Register of Threatened Species of Plants in Eyre and Western Zone

The information contained in this register was collated from Commonwealth Department of the Environment's Protected Matters Search Tool (http://www.environment.gov.au/epbc/protected-matters-search-tool)

Table 31: Threatened Species of Plants in Eyre and Western Zone		
Name	**Status**	**Type of Presence**
Lax Leek Orchid	Critically Endangered	Species or species habitat may occur within area
Chalky Wattle	Endangered	Species or species habitat may occur within area
Jumping –jack Wattle	Endangered	Species or species habitat may occur within area
Fat-leaved Wattle	Endangered	Species or species habitat may occur within area
Whibley Wattle	Endangered	Species or species habitat may occur within area
Coast Spider-orchid	Endangered	Species or species habitat may occur within area
Large-club Spider-orchid	Endangered	Species or species habitat may occur within area
Greencomb Spider-orchid, Rigid Spider-orchid	Endangered	Species or species habitat may occur within area
Frankenia plicata	Endangered	Species or species habitat may occur within area
Prickly Raspwort	Endangered	Species or species habitat may occur within area
Goldsack's Leek-orchid	Endangered	Species or species habitat may occur within area
Hale Dwarf Greenhood	Endangered	Species or species habitat may occur within area
Tufted Bush-pea	Endangered	Species or species habitat may occur within area
Metallic Sun-orchid	Endangered	Species or species habitat may occur within area
Senna Wattle	Vulnerable	Species or species habitat may occur within area
Neat Wattle, Resin Wattle	Vulnerable	Species or species habitat may occur within area
Winter Spider-orchid	Vulnerable	Species or species habitat may occur within area
Trailing Hop-bush	Vulnerable	Species or species habitat may occur within area
Ooldea Guinea-flower	Vulnerable	Species or species habitat may occur within area
Granite Mudwort	Vulnerable	Species or species habitat may occur within area
Microlepidium alatum	Vulnerable	Species or species habitat may occur within area
Silver Daisy-bush	Vulnerable	Species or species habitat may occur within area
Silver Candles	Vulnerable	Species or species habitat may occur within area
West Coast Mintbush, Limestone Mintbush, Red Mintbush	Vulnerable	Species or species habitat may occur within area
Nodding Rufoushood	Vulnerable	Species or species habitat may occur within area
Desert Greenhood	Vulnerable	Species or species habitat may occur within area
Ironstone Mulla Mulla	Vulnerable	Species or species habitat may occur within area
Annual Stackhousia, Annual Candles	Vulnerable	Species or species habitat may occur within area
Yellow Swainson-pea	Vulnerable	Species or species habitat may occur within area
Bead Glasswort	Vulnerable	Species or species habitat may occur within area

7. Register of Nationally Important Wetlands in Eyre and Western Zone

The information contained in this register was collated from Commonwealth Department of the Environment's Protected Matters Search Tool (http://www.environment.gov.au/epbc/protected-matters-search-tool)

Table 32: Nationally Important Wetlands in Eyre and Western Zone
Baird Bay
Big Swamp
Coffin Bay Coastal Wetland System
Davenport Creek
Franklin Harbour
Lake Hamilton
Lake Newland
Pillie Lake
Point Labatt
Sleaford Mere
Streaky Bay
Tod River Wetland System
Tumby Bay
Upper Spencer Gulf

8. Major route traffic volumes and freight percentages in Eyre and Western Zone

Source: http://www.dpti.sa.gov.au/traffic_volumes



9. Heavy vehicle map for Eyre and Western Zone

Source: http://www.dpti.sa.gov.au/traffic_volumes

