

Assessment Report

For the Public Environmental Report for the

Kangaroo Island Golf Resort

Programmed Turnpoint Pty Ltd



January 2016

Department of Planning, Transport and Infrastructure

136 North Terrace
Adelaide
GPO Box 1815
South Australia 5001

www.sa.gov.au

1	INTRODUCTION	3
2	BACKGROUND	5
3	THE MAJOR DEVELOPMENT PROCESS	6
3.1	PUBLIC ENVIRONMENTAL REPORT (PER) PROCEDURES	6
4	THE PROPOSAL	8
4.1	CONSTRUCTION STAGING AND OPERATION MANAGEMENT	9
4.2	INFRASTRUCTURE AND SERVICING	10
4.3	DESCRIPTION OF THE SITE AND EXISTING ENVIRONMENT	11
4.3.1	Regional Context	11
4.3.2	The Proposed Site	12
5	PLANNING POLICY SETTING	14
6	ASSESSMENT OF THE MAIN ISSUES	17
6.1	NEED FOR THE PROPOSAL	17
6.1.1	Justification	17
6.1.2	Alternative Sites	17
6.2	ECONOMIC ISSUES	17
6.2.1	Tourism	17
6.2.2	Employment	19
6.2.3	Investment	19
6.3	SUSTAINABILITY	20
6.4	ENVIRONMENTAL ISSUES	21
6.4.1	Coastal Environment	21
6.4.2	Water Management	22
6.4.3	Native Vegetation	27
6.4.4	Native Fauna	28
6.4.5	Pest Plants and Animals	31
	<i>Pest Plants</i>	32
	<i>Pest Animals</i>	32
	<i>Biosecurity</i>	33
6.4.6	Site Contamination	33
6.4.7	Waste Management	34
	<i>Waste Hierarchy</i>	35
6.4.8	Emissions	35
	<i>Noise</i>	35
	<i>Air Quality</i>	35
6.5	SOCIAL ISSUES	36
6.5.1	Construction and Operational Workforce	36
6.5.2	Surrounding Land Owners and Land Uses	36
6.5.3	Management of Public Access	37

6.5.4	Aboriginal Heritage	37
6.6	BUILT FORM AND VISUAL AMENITY	38
6.7	INFRASTRUCTURE REQUIREMENTS	39
6.7.1	Water Supply	39
6.7.2	Power Supply	40
6.7.3	Wastewater and Stormwater Management	40
6.8	TRAFFIC AND ACCESS	42
6.9	CONSTRUCTION AND OPERATIONAL EFFECTS	43
6.9.1	Construction Phase	43
6.9.2	Operational Phase	44
6.10	RISK MANAGEMENT	44
6.10.1	Bushfire Risk	44
6.10.2	Chemical Storage, Handling and Use	45
7	MANAGEMENT, MITIGATION AND MONITORING	46
8	RELEVANT POLICY DOCUMENTS AND LEGISLATION	48
8.1	SOUTH AUSTRALIA'S STRATEGIC PLAN	48
8.2	PLANNING STRATEGY	49
8.3	KANGAROO ISLAND DEVELOPMENT PLAN	51
8.3.1	State Strategic Setting	52
8.3.2	Council Wide Provisions	53
8.3.3	Zoning	53
8.4	BUILDING RULES	56
8.5	ENVIRONMENT PROTECTION ACT	57
8.6	OTHER RELEVANT POLICY AND LEGISLATION	57
8.6.1	Native Vegetation Act and Regulations	57
8.6.2	Aboriginal Heritage Act	58
8.6.3	Natural Resources Management Act	58
8.6.4	Crown Land Management Act	58
8.6.5	Environment Protection & Biodiversity Conservation Act (Cth)	59
9	CONCLUSION	60
10	RECOMMENDATIONS	62
11	REFERENCES	69
	GLOSSARY	70

Appendix 1: Relevant Development Plan Policies

Appendix 2: Requirements of the Native Vegetation Regulations

1 INTRODUCTION

This Assessment Report (AR) assesses the environmental, social and economic impacts of a proposal by Programmed Turnpoint Pty Ltd (the proponent) to develop an international golf course and resort on Kangaroo Island.

Programmed Turnpoint Pty Ltd is a provider of construction and maintenance services to the golfing, horse racing, landscape and sports turf industries in Australia and the Pacific region. It has been responsible for the construction and management of golf course developments across Australia, including the recently constructed Cape Wickham Golf Course on King Island near Tasmania, which resembles this proposal in a number of ways.

The resort and golf course would be located on the south-east coast of Kangaroo Island, South Australia. The subject site comprises some 200 hectares of land, including a mix of cleared former farmland (mainly for grazing), calcrete outcrops and sections of densely vegetated natural coastline. The location was chosen by the proponent for the natural environment and sweeping views over the Southern Ocean. The topography of the site also lends itself to the placement of greens and bunkers with minimal disturbance or native vegetation removal.

The proponents' ambition is that the golf course would be within the top 100 courses in the world, attracting 'destination' golf enthusiasts from interstate and overseas, providing a much needed golfing destination within the Kangaroo Island / Fleurieu region. In an attempt to reach the world market, it is a requirement of the project that the golf course be located as close as possible to the coast, capitalising on the views and coastal aesthetic that Kangaroo Island offers.

The total capital expenditure for the golf course and associated infrastructure is estimated at some \$14 million. The proposal is expected in the first instance, to employ 20 full time staff across the golf course and clubhouse, which has the potential to increasing to over 50 following full development of the tourist accommodation.



Figure 1 – Proposed Site Location

2 BACKGROUND

In 2013 a new approach was proposed for the future of Kangaroo Island to address the overarching themes of opportunity, people, improved access, agriculture and tourism. The new approach was designed to re-align planning policy, the Government's vision for Kangaroo Island, to unlock opportunity and to guide future development.

During 2012 and 2013, the State Government, Kangaroo Island Futures Authority, the Kangaroo Island Council and many islanders worked together to identify and unlock opportunities for Kangaroo Island. The work resulted in a comprehensive suite of policy aimed at encouraging positive and sustainable investment on Kangaroo Island to ensure its long term economic future, including:

1. **The Kangaroo Island Plan Addendum**, which provides the strategic directions for the Island's future economic and social sustainability.
2. **Kangaroo Island Structure Plan**, which is intended to assist the delivery of the strategies laid out in the *Kangaroo Island Plan Addendum* by providing a framework for a sustainable economic future based on tourism and agricultural growth, balanced with the protection of the Island's natural resources.
3. **Sustainable Futures Development Plan Amendment (DPA)**, which resulted in a comprehensive amendment to the Kangaroo Island Council's Development Plan, with a view to implementing the ambitions of the *Structure Plan*.

These documents aim to:

- Encourage sustainable growth in Kingscote, Penneshaw, Parndana and American River and make the best use of their existing and expanded infrastructure.
- Maintain a balance between supporting growth, competitiveness and productivity and protecting the Island's natural resources.
- Reinforce the expanded role of Kingscote and Penneshaw as the main passenger and freight gateways to the Island.
- Provide opportunities for tourism accommodation in the Coastal Conservation, Conservation, Primary Production and Water Protection zones, taking into account the priorities for these areas (e.g. conservation, farming and scenic amenity) by removing current size limitations.
- Ensure development surrounding the Kingscote Airport does not hinder future expansion of the airport runway.
- Discourage further expansion of the Island's forestry plantations.
- Provide for a wider range of rural industries across the Island.
- Encourage additional tourist related activities around the Kingscote and Penneshaw wharves.
- Incorporate high-quality design to protect coastal landscapes.

3 THE MAJOR DEVELOPMENT PROCESS

The Major Development (or Project) process is the highest level of development assessment in South Australia, the procedures for which are set out in Sections 46, 47 and 48 of the *Development Act 1993*. The process is used for identifying the potential environmental, social and economic impacts of a proposal and appropriate measures that may be taken to minimise those impacts. The main purpose is to inform decision-makers of the likely impacts of a proposal, before decisions are taken. The process also allows the community to make submissions on the proposal, based on the documents presented for assessment.

On 19th February 2014 the Minister for Planning declared the proposal to be a Major Development. In making the declaration the Minister formed the view that the proposed development was of major environmental, social and economic importance and that a declaration was appropriate or necessary for the proper assessment of the proposal.

3.1 PUBLIC ENVIRONMENTAL REPORT (PER) PROCEDURES

Upon formal lodgement of the Development Application in April 2014, the Development Assessment Commission (DAC) determined that the assessment of the proposal be subject to a Public Environmental Report (PER) process and issued guidelines accordingly in July 2014. Pursuant to Section 46C of the Act, the proponent must comply with the Guidelines when preparing the PER.

The proponent prepared a PER, which was released by the Minister and placed on public exhibition from Friday 15 May to Tuesday 30 June 2015. During the six week consultation period, submissions were invited from the public. Submissions were also sought from the Kangaroo Island Council and relevant Government agencies.

Two public information sessions were held on Kangaroo Island at Kingscote and Penneshaw, on behalf of the Minister, to explain the assessment process and the proposal. The purpose of the information sessions was to provide an opportunity to answer questions that would assist the public in preparing submissions. Approximately 50 members of the public attended the sessions. Representatives from Programmed Turnpoint Pty Ltd and their consultants (the proponent) were also in attendance to present the proposal, answer questions and note the issues raised by the public.

In response to the PER, a total of 38 formal submissions were received from the public and State Government agencies. The Kangaroo Island Council submitted a letter in relation to the proposal. The main issues raised in public submissions include:

Environmental Aspects

- Impact on native plants and animals.
- Site has become degraded by kangaroos.
- Good use of the natural beauty of KI.
- Flora and fauna need to be appropriately managed – concerns regarding Brush-tailed Possums.
- Impact on dune health.
- Management of introduced grasses.

- Conflict with the Coastal Conservation Zone intention.
- Potential for groundwater contamination.
- Impact on Pelican Lagoon basin.
- Strong winds.
- Water quality.
- Air quality.

Social Aspects

- Impact on Aboriginal archaeological sites cultural heritage a concern.
- Ferry and airport schedules may need to be improved if demand requires – timely access for islanders.
- Potential impact of herbicides and fertilizers on local organic fruit orchard and vegetable farm.

Economic Aspects

- Good for local business and an increase in jobs.
- Tourists to stay for longer.
- Creation of jobs.
- Local trades should be allowed to tender for the project when under construction.
- Concerns regarding financial assumptions made in construction (i.e. economic sustainability).

Infrastructure Requirements

- Water sourcing from Middle River Dam.
- Impact on water resources.
- Fire fighting provisions.
- Frequent power outages.
- Wastewater disposal.
- Using local materials, such as stone, will be beneficial to function and design.

Following the public exhibition period, the proponent lodged a Response document to the submissions on the PER with the Minister, which was released for public information on 17 September 2015.

4 THE PROPOSAL

The proponent, Programmed Turnpoint Pty Ltd, intends to develop a contemporary 'links style' championship golf course with high end accommodation and clubhouse set in a landscape that is reflective of Kangaroo Island's natural beauty. Site selection was informed and determined by land suitable for links golf, the availability of the land, vehicular access, proximity to other key points on the Island, and its 'borrowed' landscape. The proponent considered a range of coastal sites, which confirmed the appropriateness of the land at Pennington Bay for the proposed development in terms of the key operational issues outlined above.

The scope of the proposal includes:

- An 18 hole championship length golf course and associated international standard practice facilities.
- Clubhouse, including 20 accommodation suites, dining/function facilities and associated parking for up to 80 vehicles and six buses.
- Accommodation lodges, comprising 20 twin-bedroom suites with self-contained facilities.
- Staff accommodation (for up to 10 staff), including a separate dwelling for the golf course superintendent.
- Discreetly located maintenance compound (including a 1200m² maintenance shed) to accommodate golfing equipment, wash-down bays, green-keeping machinery and general back-of-house storage requirements.
- Five freehold allotments proposed for community titled residential development (i.e. maximum of 40 'condominium' style villa units, up to two storeys in height), with the possibility to lease back to the golf course when not in use by the private owners. The units would provide a more group/family friendly accommodation option. The residential land division would be developed during stage 1, to be sold to assist the financing of later stages of the resort.
- Entry road from Hog Bay Road (i.e. upgraded Davies Road)
- Stormwater and sewerage infrastructure for the capture, treatment, storage and reuse of recycled water throughout the development (where possible).
- Power and water supply to the site, including a water storage dam and a small solar farm (i.e. to augment existing power supplies).

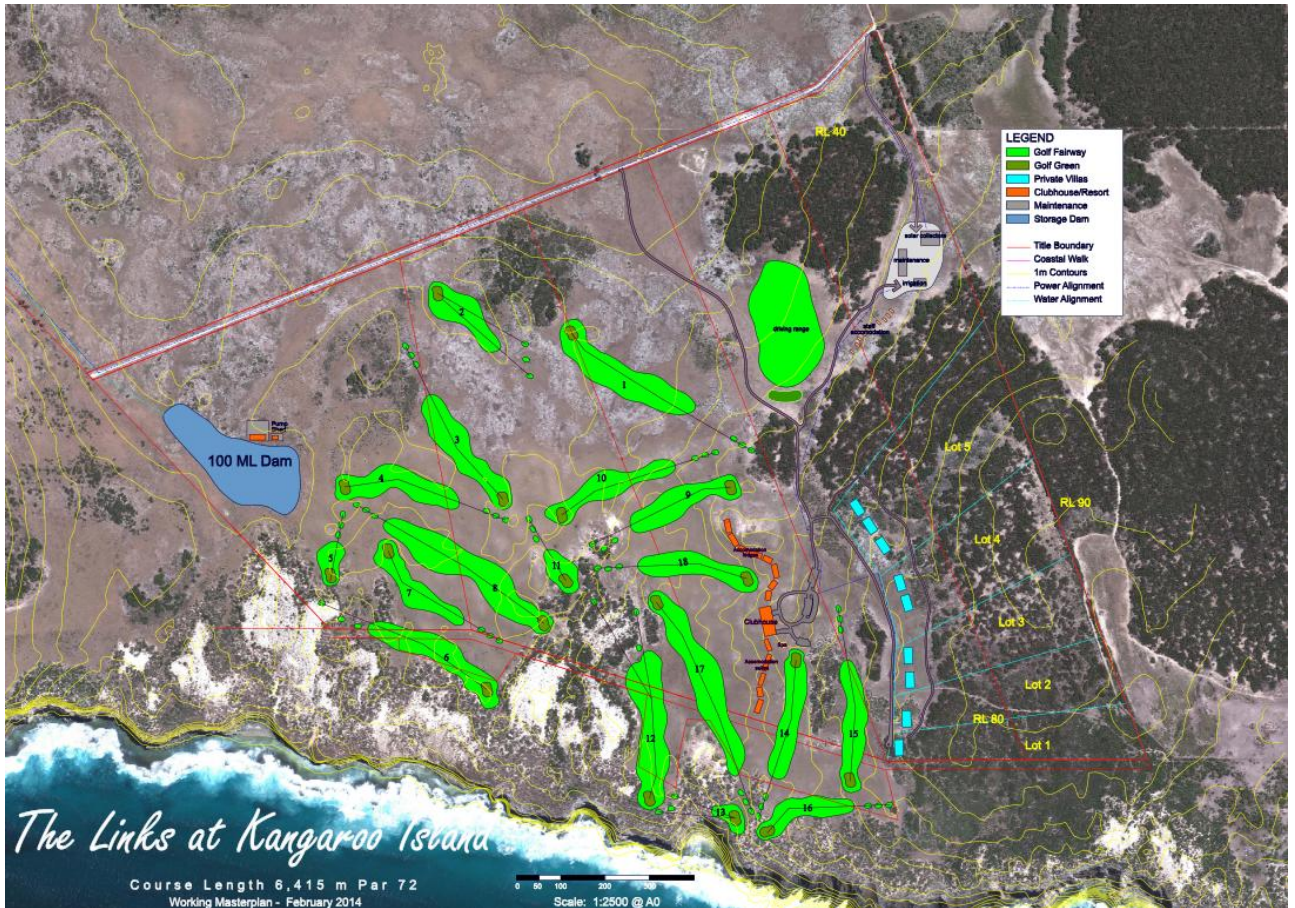


Figure 2: Proposed Layout Plan

4.1 CONSTRUCTION STAGING AND OPERATION MANAGEMENT

Construction

To begin construction of the project, a principal project manager would be engaged, as well as two principal contractors. These roles would be responsible for co-ordinating the initial works for the main building, roads and golf course construction.

The proponent has purposefully designed the development to allow staging through groupings of the lodge units directly accessible to the clubhouse.

The first stage consists of:

- Site clearing and site establishment.
- Site excavation and preparation.
- Construction of a staff village and maintenance facility.
- Construction of the clubhouse, accommodation lodge and villas.

The next stage is proposed to include construction of the golf course, including:

- Power and water infrastructure to the site, including dam construction.
- Set-out and clearing.

- Bulk earthworks, shaping and irrigation.
- Grassing and landscaping.

The proposal includes five residential allotments, separate from the resort towards the eastern part of the site. These lots have provision for the development of 'condominium' style dwellings that would be developed by buyers on an 'as needs' basis.

The construction process would be controlled by the implementation of an Environmental Management Plan (EMP), a draft of which was included in the PER.

Day-to-day Operations

The PER stated that day-to-day operations of the development are proposed to occur in three areas:

- Golf course management and maintenance.
- Golf operations.
- Resort operations.

These are proposed to be managed by a resort manager, who is responsible for the co-ordination and effectiveness of the main activities of the resort.

4.2 INFRASTRUCTURE AND SERVICING

Water

The water supply is proposed to be sourced from the Island's main water storage facility at Middle River Dam. A tapping point is proposed at the existing Middle River – Kingscote supply line at the Playford Hwy - Milk Track corner and will generally follow the Hog Bay Road alignment. Approximately 150ML per annum would be provided by SA Water, utilising a portion of the water that would otherwise overflow the dam during the winter months. The pipeline would be developed in accordance with SA Water specifications, and is proposed to be buried within the road verge. The water is proposed to be stored on-site in a 100ML dam and directed into tanks. A proportion of the water would be treated to provide potable water to the resort. A small amount of recycled water is envisaged to be used, which would also be treated before use.

Given a golf course relies heavily on water resources, the PER provided a general overview of the water supply needs but does not state how much water the golf course would actually require (particularly in a drier climate). The course's water requirements and the manner in which water would be managed is subject to further refinement.

Power

The main source of power demand would be the base loads required for the clubhouse and course irrigation. Power would be supplied from a substation constructed near the intersection of Hog Bay Road and an unnamed road reserve. Power would also be supplied through the provision of small solar farm located in the maintenance area.

Access and Parking

Part of the rationale for identifying the site as potentially appropriate for a golf course resort development was existing accessibility and the potential for improved access arrangements. Access to the site would be via Hog Bay Road, which is classified as a minor arterial road, with a speed limit of 100 km/h. From the main road, the site would be accessed via Davies Road and Cathers Road, which are gravel roads that would require some minor upgrading. The Hog Bay Road and Davies Road intersection is located approximately 20 kilometres from Penneshaw and around 40 kilometres from Kingscote. The PER estimated that approximately 900 vehicles traverse Hog Bay Road per day and that approximately 250 more daily trips would be generated by the proposed development.

On-site parking would be provided for up to 80 cars and six buses to cater for the golf course, guest accommodation, club house, private villas and staff accommodation units.

Telecommunications

The site is serviced by existing Telstra MobileNet infrastructure, so the communications needs for the proposal would be appropriately met. Currently the internet service on the Island is best described as sub-optimal.

Fire Fighting

Water storage would be available for fire fighting purposes around the golf course (via the irrigation system) and around the resort buildings (via rainwater tanks). The water would be pumped to ground sprinklers in the vegetation around the resort buildings and to roof-mounted sprinklers, with hose reels located strategically around the grounds. The residential lots would be required to dedicate an on-site water storage available for fire fighting purposes and such storage would be met from roof water collection.

4.3 DESCRIPTION OF THE SITE AND EXISTING ENVIRONMENT

4.3.1 Regional Context

Kangaroo Island is Australia's third largest island and is located just off the South Australian mainland, approximately 112 km south-west of Adelaide. Kangaroo Island has a resident population of approximately 4,500 people, with almost 40% living in Kingscote. The island's economy is dominated by a diverse range of primary production activities (including cropping, grazing, horticulture, forestry, fishing and aquaculture) and value-added products. The island's clean, green reputation underpins these industries. Kangaroo Island is also a popular destination for local, national and international visitors, as the island offers opportunities to see wildlife (including rare species) in natural habitats, spectacular coastlines and bush landscapes.

The main population and service centres are the townships of Kingscote and Penneshaw on the northern coast of the Island. Around 45% of the Island has been cleared for agriculture, primarily along the north coast and the central and eastern parts of the Island. The western end of the Island and southern coast are largely uncleared and the predominant uses are nature conservation and tourism.

The subject site is located on the south coast of the island, east of Pennington Bay on the Dudley Peninsula, between the island's two main towns Penneshaw and Kingscote. The American River - Pelican Lagoon wetland system lies 1.5km north of the site at its closest point.

The total area of the subject site is 220 hectares and is generally steep-moderately undulating, ranging from depressions with a low point of 20 metres RL to 98 metres RL at its high point. The site comprises five freehold titled land parcels, namely Allotments 6,7, & 8 (in DP70357) and Allotments 15 & 16 (in DP70358). The southern boundary of the site abuts the coastal reserve (Crown Land) for approximately 2.1km. Small parts the reserve would be utilised as part of the golf course. It should be noted the Minister for Sustainability, Environment and Conservation supports the proponent being given access to Crown land, in principle, subject to the negotiation of an appropriate lease or licence and conditions.

4.3.2 The Proposed Site

The site is predominantly vacant pastoral land, with patches of native vegetation scattered across the site. The southern sand dune system has been degraded to some extent from grazing by stock and the local kangaroo population. The site has not been used for agriculture over the past 20 years. Unmade roads created for farming are evident on the eastern and western parts of the site, with some to be used as formal access points.

The site can roughly be divided into three distinct physical segments:

1. A generally cleared area of undulating land marked by tracts of exposed limestone, degraded pasture land, sporadic clumps of low profile vegetation and limited areas of sand drift in close proximity to the coast. This segment occupies approx. 80% of the site.
2. A treed area of mainly Kingscote Mallee (*Eucalyptus.rugosa*), generally located along the ridge top in the northern and north-eastern corner of the site. This area is relatively level and forms a visual barrier on the eastern side of the site. The woodland area is defined by a cleared area on its southern side. This treed area is also notable for its clearings where exposed and fractured limestone has a limited vegetation cover of low shrubs and grasses. This segment occupies approximately 17% of the total site.
3. The third segment is characterised and defined by coastal shrubland pockmarked by clearings, which appear to have been part of grazing trails. Much of the northern part of this shrub land is regrowth which occurred following the cessation of grazing. This segment includes a subtle ridgeline at RL. 80 to RL 91 that falls off relatively sharply in the south-eastern corner of the site.



Figure 3: Proposed Site

5 PLANNING POLICY SETTING

At the highest level, the State Government's policy direction for Kangaroo Island is framed by the **South Australian Strategic Plan**. (Government of South Australia, 2011). The Plan seeks to widen opportunities for all South Australians through the pursuit of seven strategic priorities:

1. Premium Food and Wine from our Clean Environment.
2. Growing Advanced Manufacturing.
3. Realising the Benefits of the Mining Boom.
4. Creating a Vibrant City.
5. Safe Communities, Healthy Neighbourhoods.
6. Every Chance for Every Child.
7. An Affordable Place to Live.

The Plan sets a range of Goals and Targets, such as for economic growth (i.e. a resilient, innovative economy), job opportunities (i.e. to increase employment by 2% each year) and a sustainable population (i.e. increase regional populations outside of Greater Adelaide). More specifically, the Goal - '*We are known world-wide as a great place to live and visit*', sets the following target:

Target 4: Tourism industry – Increase visitor expenditure in South Australia's total tourism industry to \$8 billion and on Kangaroo Island to \$180 million by 2020 (baseline: 2002 for South Australia, 2008 for Kangaroo Island). Milestone of \$6.3 billion total industry by 2014.

Thus, the Strategic Plan has identified Kangaroo Island as a key location for the expansion of the State's tourism industry.

At the next level, the **South Australian Planning Strategy** provides the State Government's strategic planning direction for land use change and development in the State. The Strategy has various volumes covering different geographic areas of the State, including the *30 Year Plan for Greater Adelaide* and plans for Regional South Australia. The *Kangaroo Island Plan – a volume of the South Australian Planning Strategy* (2011) and recent Addendum to the Plan (2014), is one of seven regional volumes that make up the Planning Strategy. The Plan has been prepared by the State Planning Department, in collaboration with the Kangaroo Island Council, the Kangaroo Island Development Board and the Kangaroo Island NRM Board. The Addendum updated certain strategic land use directions to better align with the priorities of the Kangaroo Island Futures Authority to provide an overarching framework for economic sustainability.

The Plan sets out how the government proposes to balance population and economic growth with the need to preserve the environment and protect the heritage, history and character of the regional community.

The **Kangaroo Island Plan** provides a 'Vision' for the Island that aims to:

- Strengthen the role of the main towns.
- Ensure sustainable coastal development.

- Protect natural and industry assets.
- Expand the role of active, nature-based tourism (particularly in coastal locations).
- Maintain and strengthen primary production in appropriate areas.
- Ensure an appropriate and well-located supply of residential, commercial and industrial land to support growth.
- Retain the built and natural heritage in and around towns and settlements.

The Plan contains principles and policies that are required to achieve the Vision, which are set out under three themes:

1. Environment and culture.
2. Economic development.
3. Population and settlements.

The Principles that relate to the proposal include:

- Principle 1: Recognise, protect and restore Kangaroo Island's environmental assets.
- Principle 8: Reinforce the island as a preferred tourism destination. In particular, Australia's National Landscapes program (that commenced in 2006) identified Kangaroo Island as one of 16 key places in Australia that are primary tourism destinations unique to Australia for international nature based, experiential tourism.

The **Addendum** to the Plan expands upon the two key themes of Economy and People and is underpinned by improved access and infrastructure. In particular, it seeks to build on Kangaroo Island's reputation as a unique tourist destination by identifying and expanding new tourism opportunities for the region. It also seeks to ensure development is of high quality design, located to protect coastal landscapes and avoid impacting on the environment. As part of the Addendum process, the Kangaroo Island Structure Plan was also updated.

The **Kangaroo Island Structure Plan** provides the more detailed framework for implementing a sustainable economic future, based on tourism and agricultural growth, balanced with protection of the Island's natural resources. The Structure Plan identified the proposed site as a key tourism area for a potential golf course and convention centre.

At the 'local' level, the **Kangaroo Island Development Plan** is the statutory document that is maintained by Council and used to assess and approve or refuse new development proposals. A Sustainable Futures Development Plan Amendment (DPA) was prepared by the Minister for Planning concurrently with the KI Plan Addendum and the new Structure Plan. The DPA made amendments to the Development Plan to implement the Structure Plan at the local level, in zoning and land use policies.

The Kangaroo Island Development Plan (Consolidated 17 September 2015) outlines what sort of developments and land use are and are not envisaged for particular zones and various objectives, principles and policies further controlling and affecting the design and other aspects of proposed developments.

For Tourism Development, key objectives that relate to the proposal include:

- Objective 1: Environmentally sustainable and innovative tourism development.
- Objective 2: Tourism development that assists in the conservation, interpretation and public appreciation of significant natural and cultural features including State or local heritage places.
- Objective 3: Tourism development that sustains or enhances the local character, visual amenity and appeal of the area.
- Objective 7: Increased opportunities for visitors to stay overnight.

For Coastal Areas, key objectives that relate to the proposal include:

- Objective 1: Protection and enhancement of the natural coastal environment, including environmentally important features of coastal areas such as mangroves, wetlands, sand dunes, cliff-tops, native vegetation, wildlife habitat.
- Objective 3: Preservation of areas of high landscape and amenity value including stands of vegetation, shores, exposed cliffs, headlands, islands and hill tops, and areas which form an attractive background to urban and tourist areas.
- Objective 4: Development that maintains and/or enhances public access to coastal areas with minimal impact on the environment and amenity.

The proposal is mainly located within the Primary Production Zone, where economically productive, efficient and environmentally sustainable primary production is encouraged. The Zone also seeks the protection of primary production from encroachment by incompatible land uses and the protection of scenic qualities of rural landscapes. The 'Desired Character' of the Zone is to maintain the farming and rural character of Kangaroo Island as a feature that is a strong economic and tourism asset. Development within the zone should retain native vegetation and protect existing ecosystems to ensure the heritage and environmental significance of Kangaroo Island can continue to underpin the Island's character and values.

However, opportunity also exists to provide tourist accommodation and tourism activities within the Zone where such development is designed to put people back in touch with the natural and rural environment, or would positively contribute to the Island's tourism experiences. Tourism development is encouraged in areas that are of low capability for farming or horticulture.

A small part of the proposal extends into the Coastal Conservation Zone (i.e. golf holes that go to the edge of the coastline), where the natural features of the coast need to be conserved. Low-intensity recreational uses are encouraged to be located where environmental impacts on the coast will be minimal. The northern boundary of the site adjoins a Rural Living Zone (Pelican Lagoon South Precinct), where large allotments, detached dwellings, tourist accommodation, supported accommodation and rural activities are encouraged that do not adversely impact the amenity of the locality.

6 ASSESSMENT OF THE MAIN ISSUES

6.1 NEED FOR THE PROPOSAL

6.1.1 Justification

The PER stated the justification for the proposal is based around three considerations:

- The consistency of the proposal with the State's tourism and planning strategies, especially the policy content contained within the Kangaroo Island Sustainable Futures Development Plan Amendment (DPA).
- The significant contribution that the proposal would make to the Island's future tourism prospects.
- The identified rising demand for golf-destination tourism.

In particular, the proposal would provide a links-style golf course layout, a type of course that is popular overseas (especially in Britain) but is relatively uncommon in Australasia. In addition, its location provides an 'experience' golfing destination where visitors can enjoy the unique characteristics of Kangaroo Island, especially the scenery, natural environment and local produce. Whilst there are golf courses on the Island, there are none of this type. The resort would also provide high quality tourist accommodation and a conference facility. The proposed site provides spectacular coastal scenery, whilst being located centrally between the island's main towns Kingscote and Penneshaw.

6.1.2 Alternative Sites

The search for an appropriate site included a over-fly of the bulk of the Island's coastline. The result was that no other site met the following selection criteria:

- Land considered suitable for links golf (i.e. generally open, gently undulating, excellent close range, middle range and long distant views).
- Immediate visual connection to the ocean.
- Ability to retain the predominantly rural character of the landscape.
- Prevailing winds, rainfall and sandy soils.
- Minimal clearing of indigenous vegetation.
- Access by vehicle.
- Proximity of ingress/egress points to the Island.
- Ability of the site to allow appropriate building sites that would be relatively unobtrusive, visually capable of blending into the landscape (i.e. because of topography) and hidden from distant viewpoints, while taking advantage of spectacular coastal scenery.
- Availability of the land (i.e. the site was for sale).

6.2 ECONOMIC ISSUES

6.2.1 Tourism

Tourism in South Australia is set to play an important strategic role as the State transitions from a manufacturing base into a range of industries. The success of

Kangaroo Island as a major South Australian destination is particularly important to this transition. Tourism is increasingly becoming a key driver of the economy and is vital to the continued growth of the state, and to Kangaroo Island.

Tourism directly employs some 31,000 South Australians, making a substantial contribution to the economy, and importantly makes up over 25% of Kangaroo Island's economy, and its success and growth have achieved notable recognition through government strategies and objectives over a number of years now.

The importance of the tourism sector was identified by the South Australian Economic Development Board report, *Paradise Girt by Sea – Sustainable Economic and Social Development for Kangaroo Island* (2011), which aims to double tourism numbers within a decade. Recent investigations suggest that, based on current trends, the growth of the tourism sectors will fall short of this target without further intervention and a common purpose being embraced by Island residents, Kangaroo Island Council, government and non-government agencies and organisations.

The South Australian Tourism Commission (SATC) considers that, if successful, the project would have a substantial impact on Kangaroo Island overall. From a broad tourism perspective the golf course and resort has the potential to:

- Provide 3 to 4 star accommodation (70 suites, 180 beds) at the eastern end of the Island. The Kangaroo Island Tourism Destination Action Plan 2012-2015 (updated in 2013), prepared by the SATC and Tourism Kangaroo Island (and others), identifies the need for new accommodation on the Island, and more specifically the potential for a project of scale (including convention and conference facilities).
- Broaden the appeal of Kangaroo Island to a wider international market, and provide a new coastal experience that is complementary to the Island's current nature based brand.
- Provide a valuable base for visitors to enjoy a range of experiences on the Island, supporting local businesses and encouraging longer stays.
- Show-case and sell local produce, again supporting local business.
- Provide local employment, both during construction and ongoing operation.
- Further support the business case for upgrades to the Kangaroo Island Airport and support the operation of existing ferry services.

However, the SATC considered the resort an ambitious project with a potential risk that there is insufficient demand to be financially viable, particularly for the golf course that would be dependent on visitors to the Island. The PER did not include any financial projections beyond those broadly stated in the text and so it was not possible to gain a full understanding of potential viability

The Response Document highlighted that the proponent has recently been involved in the recently opened Cape Wickham Golf Course on King Island (off the north coast of Tasmania) that is already receiving critical acclaim and is scheduled to debut in the top 100 courses around the world. This course, like the one proposed for Kangaroo Island, has the 'wow' factor that is synonymous with the great courses of the world. Prior to this, the proponent has been involved in the building of other courses, such as Magenta Shores and Kooindah Waters (NSW), The Links at Port Douglas and Hamilton Island

Golf Course (Queensland). Due diligence investigations have been undertaken on a 'destination' style course on Kangaroo Island.

With nearly 200,000 visitors per year already visiting the Island, the proponent considers the potential golfer numbers would be easily attainable to make the project a financial success. With prospects of growing this number to nearly 400,000 visitors within the next few years and the potential for an airport upgrade to make interstate travel even easier, the demand for golf on a world class links course would further enhance the financial viability. Like other golfing destinations around the world, it is not just the golf that attracts the visitors, with wine and food tours playing an increasing role when deciding the final destination for a golfing tour. Kangaroo Island above all other tourist destinations around Australia, can provide such an offering based on the already well recognised brand that is 'Kangaroo Island'.

In an overall tourism sense, Kangaroo Island offers some of the most exciting, unique and pristine tourism opportunities available in the State. The South Australian Tourism Commission report, *South Australian Tourism Plan 2020* (2014), reaffirms the Government's ambition of an \$8 billion tourism economy with 41,000 jobs by 2020, a proportion of which must be generated by Kangaroo Island as one of the state's premier destinations. A world standard golf course would provide national and international exposure for the Island and South Australia, with increased visitation and economic benefits.

6.2.2 Employment

In terms of employment generated, the proposal is anticipated to initially employ 20 full time staff across the golf course and clubhouse, potentially increasing to over 50 following development of the tourist accommodation lodges. 2011/12 records indicate that Kangaroo Island's employment market provides for some 2,330 full time equivalent (FTE) jobs. The PER anticipated the 50 new jobs would account for some 2% of the Island's overall employment market. The tourism sector accounts for 25% of the Island's Gross Regional Product (GRP) and 20% of the employment market (i.e. 466 jobs). The new jobs would account for nearly 10% of the overall tourism employment market and could see the golf course become one of the largest employers on the Island.

In addition to newly created jobs, a fully developed resort with a restaurant and function facilities would provide a real opportunity for hospitality training and apprenticeship on the Island. The proponent has flagged the possibility of providing training and development programmes to target local residents, in order to retain locals who would have otherwise left the Island in search of ongoing employment (particularly younger generations).

6.2.3 Investment

From an economic perspective the total capital expenditure for the golf course and associated infrastructure is estimated at some \$14 million. Some 15,000 rounds of golf per year are anticipated, with a typical average spend per person per day of \$300 to \$350 (excluding accommodation and use of other facilities on the Island). The proponent considers golf course patronage could increase to more than 25,000 rounds

per year, with potential airport and passenger ferry upgrades.

The proposal would also target the local food and wine economy of the Kangaroo Island / Fleurieu region and would form a major part of the food and beverage operations of the proposal. The overall impact of this project on the local community would be significant, and is expected to be a major contributor to doubling visitation numbers by 2020 (currently peaking at 194,000 in 2011/12), a target set by the *South Australian Strategic Plan*.

The proposal would have a substantial 'multiplier effect' on local suppliers and service providers, generated by operational requirements. The PER predicted 'visitor spend' would have a 'multiplier effect' between 2.0 - 2.5. There would also be an economic 'spin-off' effect for other tourism enterprises, local producers and transport providers (i.e. airlines and ferry operators).

6.3 SUSTAINABILITY

The PER proposed a number of sustainability initiatives to achieve water and power efficiencies (particularly savings to reduce demand) and to minimise greenhouse gas emissions and the development's carbon footprint. The proposal would be marketed as an 'eco-friendly' development, with a range of management plans and strategies to ensure long-term sustainability (including a revegetation program that would improve the environmental values of the site, whilst providing an emissions/carbon offset).

The sustainability measures proposed include:

- Use of solar power to supplement mains supply.
- Use of rainwater and stormwater run-off, such as for toilet flushing, machinery cleaning, for irrigation use and for watering landscaped areas (i.e. using vegetated swales and other water sensitive design measures).
- Reuse of grey water and waste water for irrigation.
- Landscaping with local native species (i.e. that are adapted to on-site rainfall and have low water requirements).
- Minimisation and recycling of waste.

Water loss through evaporation from the large storage dam would be minimised, such as through the use of a surficial polyethylene membrane (i.e. floating cover). Limestone excavated during the construction of the dam would be used as a material for roads, car parking and golf cart/pedestrian pathways.

Sustainable building design measures would also be adopted, including:

- Passive solar heating, day-lighting and natural cooling from cross ventilation.
- Use of high performance glass and large overhangs for energy efficiency.
- High levels of insulation.
- Use of low emissivity and low maintenance building materials.
- Maximum use of low embodied building materials.
- Use of local materials (including on-site limestone for walls etc.).
- Use of timber from certified sources and minimum use of pressure treated timber.

- Use of high efficiency heating and cooling equipment, lights, appliances and water fixtures.
- Solar hot water heating.

A Smart Energy Management System, linked to a Property Management System, that controls power supply and usage in occupied/unoccupied accommodation lodges, various areas of the clubhouse/guest areas and staff quarters would be installed. Energy saving lighting and appliances would be used wherever practicable.

It is considered that a Sustainability Plan should be prepared and implemented to ensure the above measures are detailed and adopted. The Plan should also include monitoring of water, energy and waste management efficiencies. Relevant aspects of the proposed Waste Management Plan should be incorporated into the Sustainability Plan.

6.4 ENVIRONMENTAL ISSUES

The main environmental issues identified for the proposal include the effects of human encroachment on a relatively undisturbed coastline, potential impacts on the local and regional hydrology from the long-term irrigation of the golf course and the implications for local fauna populations (including the control of kangaroo and wallaby populations). However, the proposal does provide a great opportunity to retain and improve the condition of remnant vegetation and habitat and to substantially revegetate parts of the site.

6.4.1 Coastal Environment

The coastal environment of the site is characterised by tall steep cliffs and intact coastal vegetation communities, including a remnant coastal dune system. The coastal zone would be retained in a natural state and integrated within the design of the course layout. Only three holes would extend to the coastline to take advantage of the spectacular scenery and provide an 'on the edge' golfing experience.

Sand Dune Drift and Erosion

The sand drift hazard was recognised in the PER, having previously been identified by DEWNR in 2005 and which led to the retention of the coastal Crown land adjoining the site. The PER depicted sand bunkers seaward of holes 12, 13 and 16 in areas that are at high risk of sand drift hazard, which is highly unpredictable and difficult to control once activated in this exposed environment. There is a high risk of reactivating active erosion if excavation is required to create sand bunkers.

DEWNR consider that, given the high risk of activating erosion, no works should occur in the sand drift hazard area unless it can be demonstrated that the hazard can be appropriately managed. The Response document clarified that the final detailed design would limit works within the sand drift hazard areas, unless it can be demonstrated that the hazard can be appropriately managed (which would be reflected in the EMP).

Cliff Stability

The presence of sheer cliffs indicates that active erosion is occurring, which is notoriously irregular and difficult to predict. However, risks can be mitigated by proper investigation and management. The thirteenth green is the closest to the cliff edge. DEWNR considered preliminary investigations of cliff stability should occur, and any associated risks should be clearly identified and addressed, which could possibly entail a redesign of that part of the golf course. The Response Document clarified that the EMP would incorporate strategies concerning cliff erosion and hazard management.

6.4.2 Water Management

Hydrogeology

The PER acknowledged the management of the golf course has the potential to impact upon groundwater, primarily through excessive irrigation and seepage to the groundwater system. Accumulated and evapo-concentrated nutrients and contaminants may also be mobilised from the unsaturated zone to the water table as a result of winter flushing.

DEWNR considered the understanding of the hydrogeological formations and depth to groundwater below the site is currently limited, due to a lack of existing drill hole data in the area. The PER indicated that test wells would be installed to monitor ground water height and quality. The installation of proposed test wells, and on-going sampling, would improve the hydrogeological understanding of the site and allow for on-going groundwater monitoring to identify the potential transport of contaminants via the unconfined groundwater system. As part of the installation of the test wells, detailed geological information would need to be collected to better understand the fate of any potential seepage (e.g. perching on low permeability layers, or infiltration to the water table, and the direction of local and regional groundwater flow). Following construction of the wells, baseline data would need to be collected, including groundwater levels and water quality.

Test wells are not to be confused with the geotechnical surveys to be undertaken across the site as part of the preconstruction investigations (i.e. to verify subsurface conditions for the establishment of the golf course, building foundations and other related infrastructure). The Response Document stated that the presence of standing groundwater within 10 metres of the surface would be confirmed during the geotechnical surveys. Shallow observation wells (i.e. to a depth of 10 metres) would be installed, from which periodic sampling would be undertaken to verify water levels and quality. DEWNR suggested the groundwater test wells should extend to the groundwater table, which may be deeper than 10 metres.

The PER stated that geological investigations have concluded that the absence of a confining layer of low porosity sediments and depth to groundwater indicates that any excess surface irrigation within the development site would be insufficient to infiltrate to the water table. Subsequently, there should be no local rise in groundwater levels or groundwater mounding inducing increased recharge to groundwater systems and discharge to receiving environments.

DEWNR did not support this evaluation, so further testing and geotechnical surveys are required, as the presence of permeable soils could allow the drainage of excess surface irrigation that could then have the potential to infiltrate to the water table.

Construction of groundwater test wells and periodic sampling should be undertaken to verify groundwater levels and groundwater quality. Collection of detailed geological information should also be undertaken to better understand the fate of any potential seepage (e.g. perching on low permeability layers, or infiltration to the water table, and the direction of regional groundwater flow). Baseline ground water data should be collected (including groundwater levels and groundwater quality) to inform the periodic sampling.

Hydrology

The description of the site in the PER does not include information on any watercourses, drainage patterns or water features existing on site. The proposed development has the potential to affect water quality in a number of ways, including:

- Generation of nutrient rich wastewater and its disposal has potential to impact on water resources, including the marine environment.
- An increase in hard impermeable surfaces that could increase runoff and pollutants in stormwater.
- Land surfaces that may be left open and vulnerable to the erosive powers of water and wind, particularly during the construction phase.
- The use of chemicals and fertilisers on site.

Studies on coastal waters have shown how the cumulative discharge of treated wastewater and stormwater can contribute to significant degradation of the coastal environment. Suspended solids from stormwater and nutrients from both stormwater and wastewater have been identified as two of the major causes of this degradation.

It is possible to manage potential off-site impacts to the receiving water environment with careful management of the development. The high water needs of the development may, in part, be met by the use of recycled wastewater and stormwater. If appropriately managed, there should be no off-site discharge and impacts from the development can be minimised.

Water streams (i.e. wastewater, grey water and stormwater) need to be managed to minimise off-site impacts and ensure compliance with the *Environment Protection (Water Quality) Policy 2015* and the General Environmental Duty of the *Environment Protection Act 1993* (particularly in relation to protecting the marine environment and any drainage lines identified on site).

Irrigation Management, Chemical Use and Monitoring

The golf course watering system would be designed to meet the plants growth requirements and not infiltrate into the soil. The types of sprinklers used (i.e. with different spray patterns) and the layout pattern of the sprinkler network would be designed to be 'tailor made' to the size and shape of the greens, greens surrounds, fairways and tees. Irrigation would be undertaken at night (i.e. from 9pm – 5am) as the

most economical and efficient time to water. This approach would also reduce wind effects (especially over-spray) and evaporative losses, which would reduce water usage.

The design of the irrigation system would be based on the following parameters:

- The operation of the system would be carried out by a central computer in conjunction with field decoders.
- Watering schedules would be governed by an onsite weather station that would adjust the pre-set sprinkler operating times in accordance with daily evapo-transpiration rates and wind speed / direction.
- The control system would have the capability to provide repeat cycles with soak times between repeats to avoid run off and puddling, as well as reactive programs to respond to wind speed / direction, rainfall and other factors.
- Moisture sensors located across the site would monitor areas that are receiving too much irrigation. Automatic adjustments made at the controller would then regulate the irrigation times in these areas to minimise overwatering.
- Sprinkler selections and spacing would be selected to ensure a high degree of distribution uniformity to avoid unnecessary over or under watered areas. This would also minimise over-spray to prevent the spread of turf, especially into existing vegetation.
- All equipment would be suitable for use with recycled water and be operated in accordance with the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risk 2006* (Environmental Protection and Heritage Council et al, 2008).

The Response Document stated that during drought conditions, when the water supply needs to be conserved, irrigation would be scaled back on the fairways, with only the tees and greens being the priority for watering. It would be generally accepted by the golfing community that fairway condition would be reduced, with the tees and greens remaining at a suitable standard. The fairways are expected to be easily re-established within a relatively short period of time.

It is considered that an Irrigation Management Plan would need to be prepared that details the design and operational measures that would be implemented.

The PER stated a Nutrient Management Plan would be developed to ensure the supply of nutrients to the turf meets turf prerequisites, while minimising any environmental impacts. Slow release and controlled release fertilisers would be used as they decrease the risk of ground water contamination compared to soluble based fertilisers. As part of the course management, regular testing of the nutrient status of the soil would be carried out. Data on the quantities of essential elements for plant growth in the soil would be used to determine the exact quantities and types of ameliorants and fertilisers required. In this regard soil and leaf testing would be critical tools for monitoring and matching turf grass requirements with fertiliser inputs.

The PER also stated an Integrated Pest Management system would be employed, as part of golf maintenance operations, that would utilise a range of techniques to manage a particular pest problem. The system involves having a detailed level of understanding about the life cycles of pests and finding means to control pests, which are effective, low

hazard and use a range of control techniques. Pesticides would be used at recommended rates and intervals to avoid excessive application, with the practice of pesticide rotation being adopted (i.e. minimising any potential resistance build up). In addition, pesticides would be selected for low leaching potential and reducing irrigation after pesticides are applied would reduce the risk of groundwater contamination occurring.

Implementation of the proposed golf course design and operational measures should ensure the risk of groundwater mounding and discharge to the marine environment is avoided. A monitoring program, comprising a network of observation wells across the site and a water level / quality testing regime, would need to be established to detect whether local hydrology has been affected by irrigation practices. Contingencies would need to be prepared to address any long-term impacts.

It is considered that the Irrigation Management Plan, Nutrient Management Plan and the Integrated Pest Management System are inter-related and should be including in an integrated document, such as a Golf Course Management Plan. The Plan should address the design, construction and operational phases of the course.

Water Supply and Re-use

The PER stated that water would be harvested from the Middle River Dam during peak flows in the winter months, when surplus water would otherwise flow straight out to sea and would otherwise be lost. However, evidence indicates that the water going out to sea performs vital ecological functions, such as maintaining and triggering estuarine processes, providing nutrients and carbon to the marine environment and providing triggers for fish recruitment and migration, and as such is not 'lost' or 'wasted'.

The PER stated that, through an memorandum of understanding with SA Water, the site can be supplied with 150 ML of 'spill' water from the dam during off-peak months (subject to the dam overflowing during this period and adequate environmental flows being maintained downstream). The PER stated that 150 ML represents a small percentage of 'spill' volumes, equating to around 1% of an estimated long-term average 'spill' volume of 14.2 GL (but could amount to 8% during a low rainfall year).

It is proposed that 150 ML of water would be stored in an on-site 100 ML storage dam for use in the summer months. It is unclear where the remaining 50 ML will be stored and requires further consideration (i.e. the size of the storage dam may need to increase). Although it is proposed that this water is to be used for irrigation of the golf course, if it is kept separately it may also be used to supplement potable water supplies at the resort (provided it is treated appropriately).

The proponent clarified that the golf course is expected to use approximately 100 ML/yr, whilst the resort precinct would use 50 ML. Prior to water being discharged into the storage dam, a separate take-off would direct some of the water into a treatment plant (i.e. for re-chlorination and possibly improved water quality using reverse osmosis) and storage tanks. This water would be used for the resort and tourist accommodation precincts. Thus, it is unlikely that the site would hold 150 ML in combined storage at any one time. The 150 ML specified in the PER is an upper allowance for use on the site.

Excess treated wastewater is proposed to be stored in the on-site storage dam. If wastewater and treated stormwater are stored in this dam it would preclude this water being used as a potable supply. Furthermore, there may also be a shortfall in storage capacity of the storage dam, so the storage of either treated wastewater and/or stormwater in this dam is not recommended. All recycled water supplies should be stored separately to ensure that each water source is fit for purpose.

It is proposed that stormwater from hardstand areas would be managed by detention and treatment through use of bio-filtration swales and basins and used for site irrigation. This could include supplementing the golf course irrigation supplies to ensure there is no off site drainage. Rainwater is proposed to be collected from rooves and treated by UV filtration to provide a potable water supply. Greywater would be collected and reused for toilet flushing.

The EPA considered that an Integrated Water Management Plan needs to be prepared to ensure that stormwater and wastewater is appropriately collected, treated and managed to prevent off-site discharges. Such a plan would also need to consider the management of the development to protect all other water streams, including the use of chemicals (such as pesticides) to avoid the pollution of groundwater and impacts on the marine environment. This plan should detail how all water streams (i.e. wastewater, greywater, stormwater and potable water) are proposed to be managed in a fit for purpose way.

Impact on Marine Ecosystems

There is a risk that the marine environment could be affected in the long-term by potentially altered hydrological regimes due to golf course irrigation. If substantially more water is applied to the land than is used by the greens and fairways (or lost through evaporation), then a groundwater mound could potentially develop under the site. This could possibly lead to surface or sub-surface discharges to the marine environment that may contain nutrients or chemicals (which could lead to eutrophication or contamination of marine waters). Detailed geotechnical testing over the site would need to be undertaken, especially to determine whether underground flow paths to the marine environment exist or could develop for perched or local groundwater.

Provided wastewater and stormwater is managed appropriately, the proposed development would be able to be operated in a way that does not have adverse impacts on the marine environment. In particular, efficient irrigation practices and monitoring should ensure that a groundwater mound or sub-surface flow pathways do not develop that could lead to discharges to the marine environment or Pelican Lagoon.

It is also necessary to ensure that the construction phase adequately considers soil erosion and drainage management. Therefore, the Construction Environment Management Plan (CEMP) must include plans to address soil erosion and drainage management in accordance with the EPA *Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry* (1999).

6.4.3 Native Vegetation

The proposed site has been largely cleared for agriculture and used primarily for grazing, which ceased about 20 years ago. The main patches of native vegetation occur along the eastern site boundary, comprising Mallee Associations that are in good condition with an intact understory. The Kingscote Mallee (*Eucalyptus rugosa*) Associations are considered to be rare in the region. The remnant vegetation is part of a much larger expanse of intact habitat that extends to the north and east (including the Dudley Conservation Park and several Heritage Agreement areas). Significant species that use this substantial wildlife corridor may be at the edge of their ranges at the proposed site.

These patches would be retained as a backdrop to the Clubhouse precinct and the residential allotments. Smaller patches are scattered around the site and comprise Shrubland Associations that have been degraded by grazing pressure. Cleared areas are dominated by exotic pasture grasses and weeds. Good quality, intact coastal shrubland occurs along the coastal reserve that adjoins the site.

The layout of the course and the siting of buildings and infrastructure have been designed to avoid patches of native vegetation as much as possible. The PER estimated that for the 220ha site, approximately 65ha comprises remnant vegetation, of which up to 14.14ha is proposed to be cleared. This would require an off-set of approximately 70ha, either as a Significant Environmental Benefit (SEB) or as a payment of around \$67,000 to the Native Vegetation Fund, in accordance with the *Native Vegetation Act 1991*. Additional clearance may be required to provide access to the site (i.e. along Davies Road) and for the construction of the water supply pipeline along Hog Bay Road. Consideration should be given to determining if there would be an impact on matters of national environmental significance.

The PER included a comprehensive vegetation survey and the Response Document stated that a spring (2015) survey would be conducted to adequately capture annual species (especially orchids) and threatened species along Hogs Bay Road and Davies Road. Sixty-two flora species were recorded for the site, including sixteen introduced species. The only species of conservation significance identified was the Kangaroo Island Mallee (*Eucalyptus phenax* ssp. *compressa*), which is listed as Rare in South Australia under the *National Parks and Wildlife Act 1972*. This was found in the intact stand of Mallee along the eastern boundary, which would be protected. Whilst not recorded during the survey, there is a likelihood the Crimson Daddy-long-legs Orchid (*Caladenia sanguinea*) could be present. The species is listed as Rare in SA and has a wide occurrence cross the Island.

The PER proposed a whole-of-site approach to the management of native vegetation and weed species. Clearance of remnant vegetation would be minimised and existing stands protected and rehabilitated through weed control, herbivore grazing control, revegetation and natural regeneration. Revegetation and natural regeneration would be undertaken on the cleared and semi-cleared parts of the site that are not developed for the golf course (which would also require the control of weeds and grazing pressure to be effective). The revegetation strategy would aim to reinstate locally indigenous species / community types, particularly significant species (such as the Sticky New Holland Daisy *Vittadinia australasica* var. *australasica*). Landscaping around the built

components would focus on local species that have an 'ornamental' value, are low maintenance and present a low fire risk. The PER did not include a detailed landscaping / revegetation plan, as such a plan is highly dependent upon the detailed design of the golf course

The Response Document acknowledged that a Vegetation Management Plan still needs to be prepared, especially to provide detailed information on any proposed SEB and the control of weed species. The Response states that, once the layout design has been finalised and the vegetation clearance has been calculated, a Plan detailing the achievement and management of areas would be developed. A risk assessment detailing the projected impacts to each matter of ecological significance would then be developed (including appropriate mitigation measures).

DEWNR advised that a comprehensive vegetation survey of the proposed clearance area would be required to correctly and accurately calculate the required SEB offset. Finalisation of the SEB, including an associated Vegetation Management Plan, would be required prior to any clearance of native vegetation. It should be noted that the rehabilitation of disturbed areas may not meet the SEB requirements (primarily the achievement of a 'net environmental gain').

It is considered that a holistic, whole-of-site approach be adopted for the preparation of a management plan that addresses the inter-related aspects comprising vegetation clearance, the management of native remnant vegetation (including protection measures and regeneration), revegetation, weed control, grazing control and fire management. It is considered that the Native Vegetation Management Plan should be expanded to include the remnant vegetation rehabilitation measures (both natural regeneration and plantings/direct seeding) and site revegetation in a Native Vegetation Management, Rehabilitation and Revegetation Plan. The Plan should also address the control of weeds and Macropods (i.e. kangaroos and wallabies).

A Landscaping Plan (including water sensitive design measures for managing stormwater) should be prepared, in consultation with the Natural Resources Kangaroo Island nursery, as a separate document.

6.4.4 Native Fauna

Terrestrial and Coastal Fauna

The area around the site contains fauna species of conservation significance, including threatened species listed under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*, so it is important to ensure that any impacts from the proposal are avoided and minimised. The PER acknowledged that species of conservation significance are likely to occur on the proposed site (and were recorded during the site survey) and provided an assessment of the potential impacts on such species. A fauna survey was conducted in accordance with the EPBC Act survey guidelines, including a targeted bird survey focusing on key habitats for threatened bird species identified as potentially occurring in the area. The Response Document acknowledged the survey was a snap shot in time and may not have recorded all potential bird species in the local area. In response to issues raised in public submissions, further investigations would be undertaken to detect species that are

known to occur in the area, such as the Elegant Parrot, Rock Parrot, Beautiful Firetail, Bassian Thrush, Western Whipbird and Eastern Reef Egret.

The ecological assessments in the PER included more detailed information on the likely impacts on species (and matters of ecological significance) and recommendations on how they should be minimised. A risk assessment detailing the projected impacts would be developed with the appropriate mitigation measure and responsible person/agency identified.

Several species of conservation significance were either recorded for the site or occur within close proximity of the site. The Heath Goanna (*Varanus rosenbergi*), listed as Vulnerable in South Australia under the *National Parks and Wildlife Act 1972*, inhabits sand dune and mallee habitat. Whilst this habitat would be protected on the site, the species is a wide roaming hunter and may be affected by vehicles or construction machinery. Being a scavenger, it is likely to be attracted to food sources around the resort and residences. Likewise, the Common Brushtail Possum, listed as Rare (but common on Kangaroo Island), would also be attracted and could become a nuisance species (especially if inhabiting roof spaces) or could affect revegetation works.

The Scarlet Robin (*Petroica boodang campbelli*), listed as Vulnerable, also occurs in the Mallee habitat on the site. The Shy Heathwren (*Hyacola catua*) and the Southern Emu-wren (*Stipiturus malachurus halmaturinum*), both listed as Rare, may also occur within the Mallee and sand-dune shrubland respectively.

The Southern Brown Bandicoot (Eastern) (*Isoodon obesulus obesulus*), listed as Endangered under the EPBC Act, has been recorded nearby on land east of the site. This species may utilise the patch of Mallee on the eastern site boundary, as it is connected to adjoining habitat.

The main threat to local fauna is generally from habitat loss. Whilst the remnant vegetation that supports habitat for significant species would be protected, human disturbance and 'edge effects' from the development may have an impact on native fauna. In the long-term, some fauna are may become acclimatised to human activity and even benefit from the development, especially as a result of revegetation/landscaping and weed/pest control. Some fauna (especially nocturnal species) may also be affected by human disturbance and lighting during construction and operation. Pedestrian access to intact vegetation patches would need to be controlled to minimise disturbance. Residents and visitors should not be allowed to have cats or dogs to avoid predation or disturbance of fauna. Construction activities may also affect fauna in the short-term, especially due to the risk of 'road kill' or entrapment in excavations (i.e. from exposure or predation).

Kangaroo Island provides a strong-hold for populations of Eastern Osprey (*Pandion haliaetus*) and White-bellied Sea-eagle (*Haliaeetus leucogaster*), both listed as Endangered in SA. The Eastern Osprey is also listed as Migratory (and Marine) under the EPBC Act. Whilst these species were not recorded as using the inhabiting site, birds are likely to use the coastline for foraging or when flying between nest sites and foraging locations. In particular, two active Osprey nests are located within three kilometres of the site, one to the west on the coastal cliffs (plus an abandoned nest) and one to the north on an island within Pelican Lagoon. Both species have low population

numbers and are sensitive to human disturbance, with a high risk of nest abandonment during the breeding season or on a long-term basis. Thus, there is a risk that birds may avoid the area, reducing the availability of possible foraging area to some degree. However, golf is not considered a highly disturbing activity and the course has been designed only to have a minor intrusion into the coastal zone (and alternative habitat is found along the coast and around Pelican Lagoon).

The PER stated that establishing buffer zones around both active and non-active nest sites would help minimise impacts (such as 1000 metres for Ospreys and 2000 metres for Sea-eagles). The Commonwealth Department for the Environment requires a minimum buffer distance of 100 metres (i.e. as per the *Referral Guideline for 14 birds listed as migratory species under the EPBC Act*, September 2015). Buffer distances may also be required for guard-roost sites, which may be up to 800 metres from a nest. If birds are recorded as utilising the site, the PER suggested that further management measures may be necessary. An on-going monitoring program along the coast should be established by the proponent to determine the level of usage by these species and to measure any impacts from the development that may require mitigation.

Bird species and other fauna may be attracted to water storages and irrigated parts of the course. These could include common species, such as Seagulls and Ibis, but may also attracted significant species, such as Cattle Egret and Great Egret, both listed as Migratory under the EPBC Act.

The Response Document stated that a risk assessment detailing the projected impacts to each matter of ecological significance would be developed with the appropriate mitigation measure and the responsible person/agency identified. These should be detailed in a Native Fauna Management Plan. The Plan should consider any existing management plans and any proposed mitigation measures should be determined in consultation with DEWNR and Natural Resources Kangaroo Island. It is considered that the Plan should include a comprehensive monitoring program for developing a data base on local fauna populations and to detect any possible impacts that may need to be managed. The Plan should also address 'nuisance' native species, such as kangaroos, wallabies and possums.

Species Management

The PER acknowledged that establishment of permanent water sources and the introduction of irrigation and new grassed areas would attract a greater number of Western Grey Kangaroos (*Macropus fuliginosus*). The PER stated that macropods would need to be controlled over the site, as grazing pressure would affect the maintenance of the golf course to an international standard and would hinder revegetation works and natural regeneration of native vegetation. The PER also acknowledged that local kangaroo and wallaby populations would be an essential tourism attraction of the proposal (which would be marketed as 'eco-friendly').

The application has also foreshadowed the need to put in place management strategies for kangaroos, which could include monitoring of kangaroo numbers, and a range of measures, including fencing and physical barriers (e.g. around the golf course perimeter, around native vegetation patches to be restored or around revegetation areas).

Culling of kangaroos to reduce total population size would only occur as part of, or in context of, a broader Kangaroo management program for the island as already occurs from time to time. Kangaroos are protected under the *National Parks and Wildlife Act 1972*. It should be noted that a planning decision does not include approvals for the culling of kangaroos, which is a separate matter to be carefully managed in consultation with DEWNR and Natural Resources Kangaroo Island.

A Kangaroo Management Strategy is proposed to be developed as part of the final EMP to ensure that management is done responsibly and sustainably. The final details of the Plan would be determined in consultation with DEWNR and Natural Resources Kangaroo Island, surrounding landowners and local wildlife experts. The course would also attract Tammar Wallabies (*Macropus eugenii decres*), which would also need to be controlled. It is considered the Plan should be expanded to include wallabies in a Macropod Management Plan.

Marine Fauna

The proposal does not involve any works or activities in the marine environment, so there would be no direct impacts. However, there is a risk that the marine environment could be affected in the long-term by potentially altered hydrological regimes due to golf course irrigation, especially if a groundwater mound potentially develops under the site. This could possibly result in surface or sub-surface discharges to the marine environment that could lead to contamination of marine waters from nutrients (i.e. potential eutrophication) and/or chemicals. The proponent proposes careful management of this issue.

Nationally Threatened and Migratory Species

The proponent made a referral under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* and the proposal was determined to be a 'controlled action', due to potential impacts on listed threatened species/communities and listed migratory species.

The PER included flora and fauna surveys of targeted listed species that could possibly be affected. In particular, it addressed potential effects on the Eastern Osprey (*Pandion haliaetus*), which is listed as Migratory and Marine, and the Southern Brown Bandicoot (*Isodon obesulus obesulus*), which is listed as Endangered. The PER concluded there would be no inconsistency between the proposal and the EPBC Act policies and guidelines, provided prescribed design factors were undertaken.

It should be noted that, at the time of the referral, the White-bellied Sea-eagle (*Haliaeetus leucogaster*) was also listed as Migratory and Marine, but has since been re-listed as Marine only. Thus, it does not need to be assessed as an EPBC Act matter.

6.4.5 Pest Plants and Animals

Due to its relative isolation, Kangaroo Island is free from rabbits and foxes and has a relatively low number of introduced plant species. However, agricultural landscapes (such as the proposed site) have been cleared and modified, which provides an

environment conducive to the invasion and spread of introduced plant and animal species.

Pest Plants

The PER identified 18 introduced plant species on the site, including the highly invasive Onion Weed (*Asphodelus fistulosus*), Bridal Creeper (*Asparagus asparagoides*), African Boxthorn (*Lycium ferrocissimum*) and Lincoln Weed (*Diplotaxis tenuifolia*). Thus, the risk of weed invasion into native vegetation and the coastal zone needs to be suitably managed. The control of African Boxthorn is already undertaken on the site.

Conversion of grazing land that is currently dominated by introduced pasture grasses and weeds into a golf course would eliminate a main source of weed invasion into patches of native vegetation. In addition, the proposed weed control program for the site would progressively reduce weed levels in the remnant patches, which could encourage an increase in the diversity and abundance of native species.

The proposed revegetation and landscaping program, using species from the local Provenance (ideally from seeds collected from the site), would increase the levels of native vegetation over the site, which would assist with weed suppression.

The PER stated that success of the development would be dependent on active weed control, with an emphasis on invasive species, but also measures for controlling fairway grass. The Response Document stated that Bent Grass (*Agrostis* sp.) is likely to be used for the golf course greens, which is an annual grass known to be non-invasive and needs regular watering to survive. Fairways and other playing surfaces are likely to be planted with a hybrid, dwarf turf-grass couch cultivar, such as 'Santa Anna'. This grass type does not spread far from the fringes of the fairways, due to competition from deeper rooted type grasses in the 'rough' that shade the low growing couch. The layout of the irrigation network would result in controlled watering patterns that would restrict grass growth to the fairways and greens. It is considered that native species (either remnant or revegetated) should be used alongside and between fairways (i.e. the 'rough') to establish a ground cover that not only suppresses the spread of turf grass and weeds, but also provides habitat.

It is considered the Golf Course Management Plan should address the on-going management of turf species, such as couch.

Pest Animals

The PER listed a number of introduced animal species that have been recorded on or around the site, including the House Sparrow, Common Starling, Common Blackbird, House Mouse and Feral Cat. Like all human habitation, the proposal would have the potential to attract pest animal species (or 'nuisance' native species) due to the provision of water, food and shelter. A suitable monitoring and control program would need to be implemented (i.e. as part of the EMP), especially for Feral Cats that can have a devastating impact on native fauna.

Biosecurity

As Kangaroo Island is free of many of the pest animal and plant species that occur on the mainland, it is important to ensure any proposed works do not introduce these to the Island. Soil and plant material on earth moving / construction equipment would pose the highest risk, but also goods brought to the Island could potentially harbour risks, including animals and invertebrates.

The only pathogen addressed in the PER is Phytophthora, noting that it was not identified on the site but that Kangaroo Island is classified as a high risk area and its control should be detailed in the EMP. The Response Document acknowledged the biosecurity risk to farming from introducing couch grass and from introducing soils from earth moving equipment. The Response Document also stated that couch grass and soils would need to be sourced locally from the Island to reduce the risks of outside contamination with agricultural pests and other diseases. The risk of transferring pathogens via machinery and other goods is not addressed sufficiently. Machinery and goods used in the construction and on-going operation of the proposal also need to be managed, including on-going monitoring, to mitigate the risk of pest plants and animals being introduced to the Island.

The EMP would need to address the risks of pest plants and animals being introduced to Kangaroo Island, via machinery and other goods. The EMP would also need to consider the Biosecurity Policy in the *Kangaroo Island Natural Resources Management Plan 2009-2019* and the 'Too Good to Spoil, Too Precious to Lose: a Better Biosecurity Future for KI' project.

It is considered that a Weed and Pest Management Plan should be prepared, in consultation with Natural Resources Kangaroo Island and the Department of Primary Industries and Regions SA

6.4.6 Site Contamination

The PER identified the site as being historically used for broad acre grazing. Certain localised activities, such as animal dips and waste burial areas may be associated with agricultural activities that have a greater likelihood of giving rise to contamination. To establish if any potentially contaminating activities have occurred at the site, preliminary site investigations must be undertaken, prior to construction commencing. If these investigations identify any potentially contaminating activities, further work may be required.

Therefore, a site contamination consultant must be engaged to prepare a Preliminary Site Investigation Report in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*. The report must be prepared in consultation with the Environment Protection Authority and document the investigations undertaken to determine whether a potentially contaminating land use has occurred (including the potential to cause site contamination affecting the site).

If a potentially contaminating activity is identified, a Site Contamination Audit Report must be prepared that states the site is suitable for the proposed use(s). It should be noted this only applies for the long-term accommodation (i.e. proposed residential

allotments), but does not apply to proposed short term tourist accommodation areas, as this is not considered to be a sensitive land use.

If a potentially contaminating activity is discovered during the construction process, appropriate assessment and remediation would be necessary to ensure the land is suitable for the proposed use(s). Therefore, the Construction EMP needs to address the potential need for a Remediation Management Plan to be prepared in accordance with the EPA *Guidelines for Environmental Management of Onsite Remediation (March 2006)*.

6.4.7 Waste Management

The proposal would generate a number of different waste streams during the construction and operational phases. These could include waste packaging, waste materials (including some that are contaminated)/products (such as soils and plant material), organics (including grass clippings and food), refuse (especially litter) and recyclable materials. Effluent, greywater and stormwater would need to be suitably treated and disposed off or re-used (including any residues from water filtration).

The PER stated that a Waste Management Plan would be established that would:

- Assess the wastes being generated.
- Determine current disposal costs.
- Identify options for waste management that are economically and environmentally suitable.
- Include a component of staff education so that all are aware of waste minimisation.

The Plan would also include recycling initiatives for materials, such glass, cardboard/paper, scrap metal and batteries. Motor oil and hydraulic fluid would be treated, via a 'WaterStax' system or similar, to be reused on course.

The PER stated that waste disposal requirements may require an extension to Council's waste disposal facilities. It is envisaged that present capacities would be able to absorb the expected waste generated. There is currently no operating landfill disposal site on Kangaroo Island. The former landfill is now closed and operates as a resource recovery centre (transfer station). Waste for disposal must therefore be transported to the mainland. The closed landfill has an 'emergency cell' for receiving waste (e.g. for when the ferry/barges are unable to operate and transport waste to the mainland). Further details regarding the expected waste generation are required, plus a contingency plan for alternative management of waste if either (or both) the mainland or Kangaroo Island waste management facilities are not available at any time.

Any waste soil or construction and demolition (C&D) waste that is imported for reuse on the site as waste derived fill (WDF) must be consistent with the EPA *Standard for the Production and Use of Waste Derived Fill* (updated 2013). The management of such waste should be further detailed as part of the Construction EMP.

Waste Hierarchy

The waste management objective in the *Environment Protection (Waste to Resources) Policy 2010* aims to achieve sustainable waste management by applying the waste management hierarchy consistently with the principles of ecologically sustainable development. The hierarchy describes the least preferable method of waste management as being disposal, and the most preferable being to avoid waste. There are also a number of options in between, including re-use and recycle. *South Australia's Waste Strategy 2011-2015* (Zero Waste SA, 2011), combined with targets for specific waste streams, aims to achieve the State's vision of South Australia being clean, green and sustainable.

With regard to recycling initiatives, food waste could potentially be one of the largest sources from the resort. The EMP should make reference to alternatives to waste management, such as composting and the recycling of plastics.

A Waste Management Plan needs to be prepared that considers the Waste Hierarchy and the Waste Strategy and demonstrates compliance with the *Environment Protection (Waste to Resources) Policy 2010*.

6.4.8 Emissions

Noise

Although the subject site is not close to a township the proposal still has the potential to have off-site noise impacts arising from construction. In addition, ongoing impacts would arise from certain operational aspects, such as irrigation, mowers and maintenance machinery.

The PER did not identify the location of any nearby noise sensitive receivers (if any) in the surrounding locality. As such, it is not possible to make a judgement as to whether noise from the project would meet the provisions of the *Environment Protection (Noise) Policy) 2007* during operation.

The level of environmental risk with regard to off-site noise impacts on human receivers is likely to be low and able to be managed. A Noise Management Plan should be prepared that identifies any noise sensitive receivers likely to be adversely affected by noise impacts from construction and ongoing operation of any components of the project, and how noise from these components will be managed to meet the requirements of the Noise Policy and the General Environmental Duty of the *Environment Protection Act 1993*.

Air Quality

To ensure compliance with the General Environmental Duty of the *Environment Protection Act 1993*, dust must be adequately managed during the construction phase of the proposed development. The significant distances to the nearest sensitive receptors, coupled with the proposed measures to manage dust during the construction phase, reduces the air quality risks. There are unlikely to be any significant sources of odour emissions associated with the proposal.

6.5 SOCIAL ISSUES

The main social benefits of the proposal would arise through the economic effects (both direct and indirect), employment opportunities and tourism exposure that the development would generate. The provision of a new water supply pipeline from the Middle River Dam could provide a benefit to land holders near the route along Hog Bay Road, who would have a limited opportunity to tap into and purchase water (i.e. during times when the golf course is not collecting its requirements during the winter months). The new pipeline would pass American River Road, which leads to the small township of American River approximately 8km's to the west, and could potentially provide a significant supply for future growth

6.5.1 Construction and Operational Workforce

The PER envisaged that up to 60 full time equivalent jobs would be created at the height of construction, with a base level of 25 workers at any one time, which would mainly be sourced from local labour (except for specialist jobs). A turf nursery would be established, which would also offer employment and apprentice opportunities. There is an opportunity that a native plant nursery could also potentially be established (or an expansion of existing nursery operations on the Island). Work for sub-contractors would also be generated for the off-site infrastructure projects. During operation, locally based staff would be employed where possible. Potential social issues often associated with an 'outside' work force should not arise.

Thus, there would be significant employment demand that could be met by the Island's population. Employing locals would reduce the need for short-term accommodation, which may be in short supply (especially during peak tourist periods).

6.5.2 Surrounding Land Owners and Land Uses

The land surrounding the site comprises extensive stands of remnant vegetation to the east that is primarily used for nature conservation. Cleared agricultural land occurs to the north and west, which has low primary production value and is mainly used for rural living. The southern boundary of the site is separated from the coastal cliffs (and the Southern Ocean) by a Crown land coastal reserve. The current use of the surrounding land is unlikely to be affected by the proposal. Most nearby residents are either screened from the development by native vegetation and/or face away from the site (especially those off Hog Bay Road that mainly face out to Pelican lagoon). There may be some loss of visual amenity resulting from the sub-station off Hog Bay Road and overhead powerline to the site.

The PER acknowledged that residents on Davies Road would also be affected by increased traffic. Pelican Lagoon Lodge is located off Davies Road and offers bed & breakfast style tourist accommodation in a bush setting. Increased traffic during construction and operation would impose a greater level of noise that may affect the amenity of the property. However, this would be attenuated by the fact that it is close to Hog Bay Road, which one of the Island's main transport routes. It is estimated that during peak construction periods there would be up to 26 vehicular trips per hour. Construction machinery would operate between 6.30am–6.30pm from Monday–

Saturday, during which time nearby residents may experience some level of noise and possibly dust (i.e. depending upon wind direction and speed). During operation the majority of activities associated with the proposed development are not likely to have a significant noise impact and most of the potential noise-generating activities and infrastructure are centrally located on the site.

The relatively natural landscape viewed by tourists using Cathers Road (i.e. to access the coastline and/or observe the local kangaroo population) would be substantially changed. Public access along the coast would be maintained.

6.5.3 Management of Public Access

The PER stated that public access to the coastal reserve would be allowed, noting that retaining access to the coast is a long-standing principle in South Australia, which would be recognised in any Crown lease issued within this zone. As development is proposed within the coastal reserve (especially the thirteenth fairway), there is a risk in areas where golfing activities would need to coexist with public access. An Environmental and Landscape Implementation Strategy would be prepared, in consultation with DEWNR, to enhance and maintain those parts of the coastal leasehold land utilised for the development. The strategy would include, but not be limited to:

- Seed collection and propagation of locally occurring plant material suitable for revegetation works.
- Provision of tree/plant guards to protect against grazing.
- Detailed weed management programs to control weed emergence and to eradicate noxious weeds.
- Signage and erection of appropriate fencing to prevent access to sensitive parts of the site that may be subject to further erosion and deterioration.

DEWNR considered that any risks in regards to public safety and liability should be identified and addressed (including any mitigation measures required). The Response document stated that these matters would be addressed in the final version of the EMP.

6.5.4 Aboriginal Heritage

The PER included a report prepared by a suitably qualified specialist in Aboriginal heritage and archaeology that comprised the findings of a desktop study (including a search of relevant databases) and a field visit to the site. The field inspection yielded some archaeological finds, although a full survey of the site was not completed. The basis for the field visit was to ascertain the level of risk and/or likelihood of locating significant Aboriginal sites, objects or remains on the land.

In terms of the finds, these were a manuport (a manually portable stone, with hammer damage) and possibly an enlarged waterhole, which have significance for Aboriginal people and are associated with sites elsewhere in South Australia. The manuport was of a similar stone to other manuports excavated from known sites on Kangaroo Island and of a similar lithic technology.

The PER also included an analysis of existing environmental features, undertaken for the purposes of developing a risk assessment. The risk assessment is based on a

combination of information from the site inspection, background research and what is known of the association between cultural heritage sites and certain landforms. The results were broken down into high, moderate and low 'risk' categories for works encountering unidentified heritage sites.

Much of the proposed golf course is intended to be located in areas the proponent identified as 'low' risk (i.e. areas with considerable modern impact or where there are very thin soil profiles). This risk was considered to be lessened, given that only minimal excavation is proposed to be undertaken to establish the course. The intent of links style golf is to take advantage of the land's natural topography and terrain, which would minimise excavations around the site.

Some aspects of the development are proposed to be undertaken within areas the proponent nominated as 'moderate' or 'high' risk (i.e. low levels of disturbance / clearing for farming or dune systems that are intact or have been grazed). In particular, there are a small number of holes proposed to be located close to the edge of the coast in the dunes, which are essential to the success of the golf course (especially status as a high quality course in the destination golf market). In this regard, it is important to ensure that 'moderate' to 'higher' risk areas are monitored closely during the construction phase, and to ensure that an appropriate management response is in place to manage any uncovered heritage material.

The Response Document acknowledged the cultural heritage assessment was the first step in a site discovery process. A Cultural Heritage Management Plan would be prepared, in consultation with relevant Aboriginal heritage representatives, to establish protocols for any discovery of any Aboriginal sites, objects and/or remains during construction. An appropriate management, monitoring and reporting regime would be undertaken during the construction phase, to ensure that any potential archaeological sites are addressed in accordance with the requirements of the *Aboriginal Heritage Act 1988* (and/or the Coroners Act for skeletal remains). The Plan would also need to address Aboriginal heritage matters associated with the water and power supply infrastructure corridors.

6.6 BUILT FORM AND VISUAL AMENITY

The subject site is located adjacent the coast, and a distance of approximately 2kms from Hog Bay Road (i.e. at its closest point), and is largely obscured from public view. The topography is mostly moderately-steeply undulating and a calcarenite ridge blocks the majority of accessible views from the north (i.e. from Hog Bay Road and Pelican Lagoon) and the west (i.e. from the Prospect Hill lookout). Whilst parts of the development would be visible to some degree from such view points, long separation distances (i.e. 7.5km from Prospect Hill) ensure the buildings would not be a prominent feature on the landscape.

There are four areas on the site where buildings are proposed to be erected:

- Clubhouse and lodges precinct located some 400m from the coast in the centre of the site. This complex includes a small building housing a spa located some 70m to the south-east of the clubhouse.
- Maintenance facilities and staff accommodation.

- Residential buildings on 5 separate lots.
- Small shed adjacent to the proposed dam for water filtration.

It is proposed to use the existing topography to partly 'bury' the resort buildings into the high sand dune ridges to integrate the clubhouse and visitor accommodation into the landscape. The accommodation suites and lodges, in the form of 'wings', would extend out from both the northern and southern extremities of the clubhouse building and generally follow the contours in a slightly serpentine manner. The buildings would face out towards the coast. The remnant vegetation back-drop would also assist in mitigating the visual intrusion of the buildings on the landscape. The buildings would not protrude above the sight-line of the vegetated ridge top.

To further mitigate their visual impact, the buildings would be constructed using 'natural' materials (including local stone) and colours to blend with the coastal landscape. The visual impact of the golf course itself would be more pronounced over the summer months, when the verdant green colour of the course would contrast with the brown-straw colour of the surrounding 'parched' landscape.

The maintenance compound and staff accommodation would be located on a site where they are screened by existing vegetation.

The proposed residential villas are expected to be 'condominium' style units up to two storeys high. Whilst they are located toward the top of the ridge that runs along the eastern site boundary, the rooflines would be below the ridge top and they would be largely be screened by existing vegetation in the foreground and background.

The PER stated they are portrayed as conceptual only, as the final design would be up to the individual land owners. However, strict Building Guidelines would apply to ensure high standards of design are maintained and are commensurate with both the environmental setting and the design theme adopted for the clubhouse precinct. The guidelines would also include reference to cladding materials (i.e. which are sympathetic with the surrounds), height limitations (i.e. to 8 metres above existing ground levels), landscaping requirements, compliance with building footprints for each of the allotments, vegetation removal minimisation, site lines, orientation, fenestration and other requirements.

It is considered that a Land Management Agreement may be required as a mechanism to ensure the design standards, environmental controls and fire management requirements are met for any potential future applications for buildings associated with the residential land division.

6.7 INFRASTRUCTURE REQUIREMENTS

6.7.1 Water Supply

The PER stated that SA Water has agreed to provide the site with 150ML of off-peak supply from the Middle River Dam storage. The Dam is the Island's main water supply source, with a current storage capability of approximately 540ML. During the rainfall season, when the dam overflows, only a very small percentage (less than 10%) is

actually captured. The remainder of this water flows down the catchment and eventually out to sea.

It is proposed to capture a portion of this water during the time that it overflows the weir. This typically occurs from around mid-May to mid-October. Anecdotal evidence suggests that the weir in a normal year continues to overflow as late as November. Thus, the development would have no negative impact on the existing water resource of the Island. It should be noted that whilst the proposed take from the dam during peak flows currently represents a small percentage of the overflow, drought or climate change may alter this in the future.

The current water supply is chlorinated and transferred to the township of Kingscote and other users in the region. A tapping point on the existing pipeline near the Playford Highway and Milk Track corner has been identified as the location where a new pipeline would be connected. A 35km long pipeline to the site would be established along Hog Bay Road. Due to the pressure in the system, water can be gravity fed to the site at approximately 11 litres per second, thereby significantly reducing power costs for pumping. Water would then be stored in an on-site dam that would be large enough to capture the annual irrigation requirement.

Investigations determined there was no suitable groundwater source near the site and that desalination was not acceptable due to environmental impacts and power requirements.

6.7.2 Power Supply

An electricity supply for the proposal would be provided by gaining access to the existing 33kV transmission line that runs along Hog Bay Road. A developer funded sub-station would be constructed near the intersection of Hog Bay Road and an un-named road easement north-west of the site, from which an overhead powerline would run along Cathers Road to connect the development at the maintenance compound site. An under-ground power line would connect with the Clubhouse precinct. A spur line would extend to the storage dam site. This route largely avoids the need for vegetation clearance, as opposed to a shorter route along Davies Road.

A small solar farm (i.e. 80 kW/day) would be established near the maintenance compound to supplement the mains source, mainly to meet lighting requirements. Solar hot water heating would also be used as an alternative power source.

A generator would provide a back-up power supply if there was a sudden power loss, power fault or 'black-out'.

A telecommunications tower would also be erected at the sub-station site.

6.7.3 Wastewater and Stormwater Management

The PER stated that sewage and wastewater treatment would be treated using an 'Econocycle' system. This system uses a natural, chemical free process to treat sewage and wastewater, converting it to clean water that would be used to irrigate planted vegetation located away from the clubhouse precinct.

The overall treatment system would collect wastewater from all areas of the development and would treat it in a series of localised, compact state-of-the-art wastewater treatment package units, with all effluent treated to Class B standards (as per the *South Australian Reclaimed Water Guidelines*, 1999) and directed to the various holding tanks located around the site for irrigation purposes.

It is proposed that the tourist accommodation and restaurant components would take advantage of stormwater and wastewater harvesting, especially for flushing toilets. It would also be used to supplement irrigation water for the golf course and landscaping. Greywater is also proposed to be collected, stored and used for toilet flushing and fire fighting purposes. It is estimated that the average daily peak consumption of potable water would be in the range of 50,000 litres per day, but the use of a greywater system could reduce this by approximately 25,000 litres per day. Treated wastewater from the maintenance compound, staff accommodation and the proposed residential allotments would be used to provide irrigation around both the staff quarters and the open space associated with the residential development.

Surplus water from the systems would be directed to the golf course irrigation storage dam and used to irrigate the course.

Roof water is proposed to be collected, stored in tanks and treated to provide a potable water supply. Details regarding the management of overflows and the size of the proposed storage tanks would need to be provided.

Stormwater from the hardstand area is proposed to be treated by bio-retention systems and used for irrigation purposes. When designed, constructed and maintained in line with best management practices, bio-retention can be an effective way to treat stormwater. Best practice with regard to bio-retention is considered to be a design which uses the guidance contained in the *Adoption Guidelines for Stormwater Biofiltration Systems: Cities as Water Supply Catchments – Sustainable Technologies* (Cooperative Research Centre for Water Sensitive Cities, 2015).

With regard to plantings to support biofiltration, it is generally preferable to use species that tolerate periodic inundations. The PER stated that vegetation species that are endemic to the site would be used. To be effective at treating stormwater on a long term basis, it is recommended that at least 50% of the plants used are those recommended in the Biofiltration Guidelines. Companion plants of locally endemic species should be used wherever possible..

Based on the information provided in the PER, it is difficult to confirm whether the proposal would be managed in a way to ensure compliance with the EPA *Environment Protection (Water Quality) Policy 2015* and the General Environmental Duty of the *Environment Protection Act 1993*. Therefore, an Integrated Water Management Plan will need to be prepared, in consultation with the EPA, to ensure adequate infrastructure is provided to ensure appropriate management of water, wastewater, greywater and stormwater. Stormwater should be managed to prevent offsite discharges and all water streams should be used in a fit for purpose regime. Detailed plans need to be prepared that show the location of all proposed water related collection, treatment and storage facilities and features.

6.8 TRAFFIC AND ACCESS

Access to the site is via Davies Road, which intersects with Hog Bay Road, the main transport route between Penneshaw and Kingscote. Hog Bay Road is a State Government road, with care, control and management the responsibility of the Commissioner of Highways.

Traffic characteristics for a relatively remote golf course, such as that proposed for Kangaroo Island, differ from the traditional metropolitan or country course. In particular, it would be a 'destination' course where visitors are likely to fly in, and use shuttle bus services or hire vehicles to access the resort, or use the ferry and their own vehicle (or hire vehicles). Visitors are likely to stay for longer durations, rather than just visit for a few hours to play golf.

The PER included a traffic impact assessment, which assessed the number and frequency of vehicle movements to and from the development on any given day, particularly the impact on the ongoing use and safety of Hog Bay Road by other road users. The assessment also considered the nature of movements at the intersection itself, in regards to speed limits, stopping distances and sightlines. The PER calculated that, during operation, the development would generate 170 additional vehicle trips/day during the week and 260 trips/day during the week-end.

The Traffic Impact Assessment presented in the PER considered that Hog Bay Road has sufficient capacity to be capable of accommodating the additional traffic generated by the proposal. In particular, a sight distance of 210 metres (i.e. based on a Safe Stopping Distance) were considered achievable at the existing road junction. It concluded the increased traffic flow would not warrant channelized turn lanes at the junction. The Department of Planning, Transport and Infrastructure (DPTI) – Safety and Services Division considers that Safe Intersection Site Distance (as per the *Ausroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*) requires a site distance of 293 metres. Thus, an upgrade of the intersection would be required, including channelized turning lanes. The need for infrastructure upgrades at the junction (including lighting and signage) would need to be further investigated in consultation with DPTI - Safety and Services Division.

Given the existing conditions of Davies Road and the expected increase in vehicle movements, it is proposed to upgrade Davies Road to a two lane gravel road, where vehicles can safely pass each other. To keep the rustic feel of the entry experience down Davies Road, it is not the intention to fully seal this road. Some minor works to improve drainage flows and minor earthworks to improve site lines may be required. Works to improve Davies Road may involve limited native vegetation clearance, which would be undertaken in accordance with the *Native Vegetation Act 1991*. The Kangaroo Island Council would be consulted on a suitable design that is in keeping with the local area and meets relevant guidelines, regulations and specifications. Access through the site would be on formed gravel surface roads, in accordance with Council requirements.

6.9 CONSTRUCTION AND OPERATIONAL EFFECTS

6.9.1 Construction Phase

During the 18 month construction period, there are a range of standard impacts associated with a large-scale development proposal that are likely to occur, including:

- Earthworks that disturb soils and change the topography of the land (and natural drainage), which would require the control of wind and water erosion.
- Generation of air emissions, which would require the control of dust, noise, odour and pollutants.
- Increased traffic (particularly heavy vehicles), which can have an impact on road safety and cause disruption to local traffic movements.
- Disturbance to the coastal and terrestrial environment.

Activities undertaken in the building and construction industry have the potential for significant stormwater pollution and impacts to receiving waters. Once soil is disturbed during construction it is easily eroded and moved off the site into drainage pathways. If not managed appropriately, sediment and other pollutants (including those from building and construction activities) can flow with stormwater, untreated into natural water bodies and the marine environment.

The EPA *Environment Protection (Water Quality) Policy 2015* specifies that a number of pollutants cannot be discharged to the stormwater system or onto land where they may enter water bodies. Those pollutants most relevant to the building and construction industry include:

- Brick, bitumen or concrete cutting wastewater.
- Building wash-water.
- Washdown water from cleaning vehicles or equipment.
- Building construction or demolition waste.
- Sawdust, brick dust, concrete dust.
- Solvents, stain or varnish.
- Soil, clay, gravel or sand.

To fulfil the obligations of the Water Quality Policy and ensure these pollutants do not move off site, it is recommended that all building or construction sites undertake erosion, sediment and drainage control management practices. The EPA *Code of Practice for the Building and Construction Industry* (1999) is linked to the Water Quality Policy and designed to assist in the compliance with the General Environmental Duty of the *Environment Protection Act 1993*. The Code requires the preparation of a Soil Erosion and Drainage Management Plan (SEDMP) if:

- there is a high risk of sediment pollution to adjoining lands or receiving waters; or
- the total area to be disturbed, or left disturbed, at any one time exceeds 0.5 hectares.

As both of these criteria apply, an SEDMP should be prepared, in consultation with the Environment Protection Authority, and be incorporated into the Construction EMP.

Some activities on construction sites are noisy. Although some noise may be unavoidable, it can often be controlled using improved work practices. This includes

builders taking all reasonable measures to minimise noise and to limit noise activities to between 7am - 7pm, Monday - Saturday.

Noise from construction aspects of the proposal is required to meet the mandatory provisions of the EPA *Environment Protection (Noise) Policy 2007*. The consideration of noise during the construction phase of the proposed development should be included in the Construction EMP.

6.9.2 Operational Phase

The most significant impacts during operation of a golf resort are likely to be:

- Potential long-term effect on local hydrology, which would be minimised by the design and operation of the golf course irrigation system.
- Increased human activity and disturbance within the coastal environment, which would be offset by an environmental improvement program.
- Visual impact of buildings and the golf course (especially during summer when the 'green-ness' of the course contrasts with the surrounding 'parched' landscape), which would be minimised by the siting and design of buildings.
- Increased vehicle traffic by visitors and service providers, which would be managed by road upgrade works.

The operational impacts of the proposal would be addressed by the Operational EMP.

6.10 RISK MANAGEMENT

The main risk associated with the proposal is considered to be the risk posed by bush fire. Lesser risks that can be adequately managed include public risks (such a public safety along the coastal cliffs and road safety along Hog bay Road) and environmental risks (such as ground water mounding, pest plants/animals, bio-security, cliff stability, erosion, sand drift and chemical storage and handling).

6.10.1 Bushfire Risk

The Kangaroo Island Council Development Plan (2015) identifies the majority of the site as being within a 'High' risk Bushfire Protection Area, primarily due to the presence of native vegetation. The western end of the site, which is mainly cleared grazing land, is within a 'Medium' risk area. The large expanse of remnant vegetation to the north and east of the site would pose a significant bushfire risk to the development.

The PER proposes a combination of passive and active bushfire management strategies, especially to comply with mandatory standards and to minimise vegetation clearance.

Passive measures include:

- Siting of the clubhouse and visitor accommodation away from the patches of Mallee vegetation to provide a 20 metre buffer. Modified vegetation, car parking and the access road would be within the buffer to act as a fire reduction zone. The grassed areas of the golf course would provide a buffer from coastal dune vegetation.

- Buildings constructed in accordance with the principles of Australian Standard AS3959-1999 (Level 3 Construction), as recommended for Extreme Fire Risk.

Active measures include:

- Butterfly sprinklers, raised above the height of the vegetation and located within 10 metres of all buildings, to saturate the vegetation immediately adjacent to the buildings.
- Roof mounted sprinklers located above gutters and near roof ridgelines to limit spark and ember attack and reduce radiant heat impact.
- Hose reels located around the clubhouse and accommodation precinct and the maintenance compound to provide additional fire fighting infrastructure to control spot fires and ember attack.
- All sprinklers and hose reels will be served by a continuous main line controlled by a pump, with back up diesel powered generators.
- Minimum supply of 150,000 litres maintained at all times to supply this system, with water being stored in a combination of the main irrigation dam and storage tanks in and around the clubhouse precinct.

Due to the dense vegetation along Davies Road, the biggest risk to life would be in the evacuation of the site via this road. The main clubhouse building would be designed as a safe refuge within which staff and guests can be safely accommodated without the need for additional assistance. In the event of a fire, it is proposed staff and guests would remain in the clubhouse as the fire approached and then proceed to a specific refuge area when directed by trained staff.

Emergency vehicles could access the site via Davies and Cathers Roads. In extreme circumstances they may be able to use the unnamed road on the western boundary of the site, allowing access direct to Hog Bay Road. Although presently unformed, this easement would be used to provide water and power services to the site, which necessitate its formation for maintenance vehicles. Emergency access to the residential lots is via the proposed made road and a 3 metre wide made track on their eastern side. In emergency situations the golf course environs (particularly the many tees located throughout the course) could be used as temporary helipads. In addition, the driving range could be used as a key location point for emergency access/egress.

6.10.2 Chemical Storage, Handling and Use

The management of chemicals, such as pesticides and fertilisers, requires appropriate storage in bunded areas as per EPA *Guidelines for Bunding and Spill Management* (2007). The use of pesticides (including herbicides) should be conducted in accordance with the EPA *Guidelines for Responsible Pesticide Use* (2005) and the EPA *Safe and Effective Pesticide Use: a Handbook for Commercial Spray Operators*. The use of herbicides should be similarly managed. Application of fertilisers should be at recommend rates and irrigation after application should be managed so there is no runoff and drainage to groundwater is minimised. Procedures for this should be outlined in the Golf Course Management Plan.

7 MANAGEMENT, MITIGATION AND MONITORING

The PER stated the proposal would be developed and operated under a quality assurance approach, primarily through the ISO 9000 group of standards. In addition, ISO 14000 standards would be adopted for managing environmental responsibilities, including audits, communications, labelling, life cycle analysis and dealing with issues such as climate change. The majority of work on the site would be undertaken by approved and suitably qualified contractors who would need to implement with their own adopted quality assurance systems.

It is considered that the proponent would need to establish the fundamental quality assurance standards that would need to be met in relation to work practices/protocols, strategies to manage issues identified through the assessment process, monitoring requirements and follow-up contingencies. These commitments would initially be addressed in Environmental Management Plans (EMP's) for the construction and operational phases.

To ensure consistency of approach, contractors would need to be responsible for preparing an Environmental Management Implementation Plan (EMIP) that would document how the management requirements outlined in the PER (including the draft EMP) and any approval requirements would be implemented during construction. A more detailed Construction EMP would be prepared by the appointed contractor(s), which would be regularly reviewed and updated during construction, such as on a quarterly basis or when there is an incident or a change in scope. A more detailed Operational EMP would also be prepared by the intended operator, which would also be regularly updated.

There is expected to be a process of progressive refinement of the EMP's as more detailed investigations and plans are produced. In addition, the EMP's would be dynamic plans that adapt to varying site conditions and activities being undertaken at a given point in time, with modifications made should controls prove to be ineffective.

The EMP should address:

- Objectives for environmental management.
- Performance criteria to be met.
- Management actions, including responsibilities and timing.
- Monitoring regimes and corrective actions.
- Requirements for reporting and auditing.
- Incident and emergency response processes.

The PER included a draft EMP that addressed impacts under the headings of:

- Purpose and Application.
- Pre-Construction Planning and Design.
- Environmental Management Plan.
- Land Disturbance.
- Noise and Vibration.
- Waste Minimisation.
- Contaminated Material and Wastes.
- Other Environmental Issues.

- Inspections, Monitoring and Audits.

The Response Document acknowledged the draft EMP was a high level generic document that would be refined as part of the detailed design phase. An expanded list of issues that would be address was included. The Response also included a copy of the EMP prepared for the King Island (Cape Wickham) Golf Course, as an example of the level of detail that would be provided.

The EMP's would need to incorporate the following management plans, where relevant:

- Soil Erosion and Drainage Management Plan
- Sustainability Plan.
- Golf Course Management Plan.
- Integrated Water Management Plan.
- Native Vegetation Management, Rehabilitation and Revegetation Plan.
- Fauna Management Plan.
- Cultural Heritage Management Plan.
- Landscaping Plan.
- A Weed and Pest Management Plan.
- Fire Management Plan.
- Waste Management Plan.
- Noise Management Plan.

The EMP's would be used to guide detailed design, site establishment, construction, operation and decommissioning of the proposal.

Whilst the full details are not provided at this stage, the PER demonstrated the proponent's commitments to sound environmental management. Prior to construction commencing, these aspects would need to be further detailed, with input from technical experts within relevant Government agencies (and possibly Council). Some monitoring requirements would need to be commenced in advance of construction (or existing data collection continued), in order to establish an adequate baseline upon which to measure the impact of any changes to the environment.

In order to detect any changes to the site or the surrounding environment and to measure the effectiveness of mitigation measures, targeted monitoring should be addressed in the EMP's. For consistency with other Major Development proposals, the title of the EMP's should be a Construction Environmental Management and Monitoring Plan (CEMMP) and an Operational Environmental Management and Monitoring Plan (OEMMP), primarily to reflect the importance of monitoring. These plans provide the 'umbrella' documents, under which specific Management Plans sit.

As part of any development approval, these plans would need to be satisfactorily completed, in consultation with relevant Government agencies (and possibly Council), prior to works commencing on the site or before operation. The CEMMP and OEMMP required by an approval would need to include relevant aspects related to design, construction and operational matters from the range of management type plans prescribed in the PER, Response Document and this assessment.

8 RELEVANT POLICY DOCUMENTS AND LEGISLATION

The Major Development process aims to provide a 'one-stop-shop' approach for gaining not only development approval, but a range of approvals required under different legislation. The investigations and information collected as part of the process, and consultation undertaken with relevant government agencies, provides a degree of certainty that consequential approvals would be gained to enable the development to proceed.

Section 48(5) of the *Development Act 1993* requires that, before the Governor considers a proposal that has been declared a Major Development, the Governor must have regard to (amongst other things) the provisions of the appropriate Development Plan, the Development Regulations 2008, the Building Rules, the Planning Strategy, the *Environment Protection Act 1993*, and any other matters considered relevant.

In respect of applications being assessed as Major Developments under the Act, the appropriate Development Plan and Planning Strategy are those current at the time of the Governor's decision.

8.1 SOUTH AUSTRALIA'S STRATEGIC PLAN

When making a decision, the Governor has regard to any other matters considered relevant to the proposal. In this instance, the assessment has also been carried out with reference to South Australia's Strategic Plan (Government of South Australia 2011). The Plan seeks to widen opportunities for all South Australians through the pursuit of seven strategic priorities:

1. Premium Food and Wine from our Clean Environment.
2. Growing Advanced Manufacturing.
3. Realising the Benefits of the Mining Boom.
4. Creating a Vibrant City.
5. Safe Communities, Healthy Neighbourhoods.
6. Every Chance for Every Child.
7. An Affordable Place to Live.

The relevant Strategic Plan Goals and Targets include:

Goal: We are known world-wide as a great place to live and visit.

Target 4: Tourism industry – Increase visitor expenditure in South Australia's total tourism industry to \$8 billion and on Kangaroo Island to \$180 million by 2020 (baseline: 2002 for South Australia, 2008 for Kangaroo Island). Milestone of \$6.3 billion total industry by 2014.

Goal: South Australia has a resilient, innovative economy.

Target 35: Economic growth – Exceed the national economic growth rate over the period to 2020 (baseline: 2002-03).

Goal: South Australia has a sustainable population.

Target 46: Regional population levels – Increase regional populations, outside of Greater Adelaide, by 20,000 to 320,000 or more by 2020 (baseline: 2010).

Goal: All South Australians have job opportunities.

Target 47: Jobs – Increase employment by 2% each year from 2010 to 2016 (baseline: 2010).

Goal: We are physically active.

Target 83: Sport and recreation – Increase the proportion of South Australians participating in sport or physical recreation at least once per week to 50% by 2020 (baseline: 2011-12)

It is considered that the proposal is consistent with the South Australia's Strategic Plan, as it would help boost the State economy through tourism, specifically for Kangaroo Island. This would boost the State's economic growth rate and increase employment, especially for a regional population. The proposal would also encourage participation in sport and recreation.

8.2 PLANNING STRATEGY

The relevant volume of the South Australian Planning Strategy is the *Kangaroo Island Plan* (2011) and the *Sustainable Futures Addendum to the Kangaroo Island Plan* (2014). The Plan provides strategic land use directions for the Island and aligns with the priorities of the Kangaroo Island Futures Authority to provide an over-arching framework for economic sustainability.

The Plan details Principles and Policies under the themes of 'Environment and Culture', 'Economic Development' and 'Population and Settlement'. The following specific Principles relate to the proposal:

- Principle 1:** Recognise, protect and restore Kangaroo Island's environmental assets.
- Principle 3:** Identify and protect places of heritage and cultural significance, and desired town character.
- Principle 6:** Retain and strengthen the economic potential of the island's primary production land.
- Principle 8:** Reinforce the island as a preferred tourism destination.

The following specific Policies relate to the proposal:

- Policy 1.5:** Protect natural coastal, marine and estuarine areas of high conservation, landscape or environmental significance by limiting development in these areas. Development may require such a location in limited circumstances—for example, a tourism development of state significance—in which case the

development's social and economic benefits must be shown to outweigh the environmental and amenity impacts.

- Policy 1.9:** Recognise areas of high biodiversity value, and locate and design development to prevent the loss, degradation and/or fragmentation of native vegetation and any loss of species and/or ecological communities.
- Policy 1.14:** Avoid development in areas with significant landscapes that can be viewed from tourist routes, walking trails, the beach or the sea, unless the development requires such a location (such as a development of state significance), in which case the scale, height, design and siting of buildings must protect views to, from and along the ocean and scenic coastal areas; minimise the alteration of natural landforms; be visually compatible with the character of surrounding areas; and restore and enhance visual quality in visually degraded areas, where feasible.
- Policy 2.2:** Decrease the risk of loss of life and property from extreme bushfires through the creation of buffers around new growth areas that are adjacent to native bushland.
- Policy 3.3:** Identify and protect sites that have Aboriginal cultural significance and a guidance role in relation to native title and Indigenous Land Use Agreement (ILUA) requirements.
- Policy 4.1:** Promote carbon sequestration and greenhouse gas mitigation through land-use/ management practices (for example, reintroducing vegetation and restoring habitat), taking into account climate and soil suitability and species characteristics.
- Policy 4.5:** Support the incorporation of sustainable energy and water supply, conservation and efficiencies (for example, stormwater re-use, wind and solar technologies, green buffers, WSUD, building orientation to maximise solar access and shaded areas) in the design of residential, commercial and industrial developments and subdivisions.
- Policy 8.3:** Facilitate sustainably designed tourist accommodation in suitable locations throughout the island.
- Policy 11.3:** Development in areas remote from infrastructure should be self-sufficient in energy, water supplies, and wastewater management.
- Policy 11.6:** Manage waste in accordance with the Zero Waste SA hierarchy of waste management practices (from the most preferred to least preferred: avoid, reduce, re-use, recycle, recover, treat, dispose) by ensuring that settlements and developments have appropriate space, facilities, access and construction methods.

The Addendum amended the Policies in the Plan to identify and expand new tourism opportunities, whilst ensuring development is of high quality design and located to protect coastal landscapes and avoid impacting on the environment. In particular, Policy 1.5 now recognises that to meet an increasing international demand for special tourism experiences that KI is well placed to provide, there needs to be a recognition that in limited circumstances tourism development should be allowed if it meets environmental, social and amenity criteria and is consistent with the strategic intent of the key state and federal tourism policies and plans (eg National Landscapes Strategic Plan and SA Tourism Destination Action Plans). To meet a range of accommodation and tourism experience needs, land use and development policy should allow well designed accommodation for tourism that does not detract from scenic and landscape value of a location.

In addition, it should envisage a limited number of resorts of excellence in scenic and landscape areas, located and designed such that scale, height, design and siting is respectful of and does not detract from views of the rural, natural or wilderness landscape, of the ocean and coastline, or the elements of the natural landscape. Tourism accommodation of varying intensities may be considered in coastal and rural areas and areas of high conservation significance provided it meets criteria designed to minimise visual and amenity impact and interface issues with activities on adjacent land, and avoids environmental impacts.

Principle 8 of the Plan has also been amended to reflect Kangaroo Island's identification under Australia's National Landscapes program (a joint initiative of the Australian Government statutory authorities Tourism Australia and Parks Australia), as one of 16 key places in Australia that are primary tourism destinations unique to Australia for international nature based experiential tourism. To deliver a range of experiences focussing on the coasts, landscapes, wildlife and the rural values of the Island, there will need to be a variety of sustainable, well-designed tourist attractions, accommodation and facilities at varying scales across the Island.

The Kangaroo Island Structure Plan (2014) supports the Kangaroo Island Plan and has identified the proposed site as a key tourism area for a potential golf course and convention centre.

In conclusion, the proposal meets the State Governments policy directions outlined in South Australia's Strategic Plan and the South Australian Planning Strategy (i.e. as detailed in the Kangaroo Island Plan, Addendum and Structure Plan). In particular, it provides a key tourism opportunity to boost the economy of Kangaroo Island and provide local employment, whilst protecting and enhancing the environment. In addition, it could establish an international tourist attraction for the State that would help promote South Australia as a place to visit, especially our premium food/wine and clean environment.

8.3 KANGAROO ISLAND DEVELOPMENT PLAN

The Kangaroo Island Development Plan (Consolidated 17 September 2015) sets out the 'rules' (i.e. on-the-ground planning policies) for what can be done on any piece of land and the detailed criteria against which development applications are assessed. The Plan includes a Strategic Setting to reflect the relevant Planning Strategy (i.e. the

Kangaroo Island Plan) and Council's own local strategic investigations. It also includes a suite of general provisions (i.e. policies) that apply across the whole Council area that relate to a range of environmental, social and economic development issues. Each parcel of land is identified within a specific Zone, where more detailed policies give greater certainty and direction about where certain forms of development should be located. Generally, envisaged forms of development are identified (especially through the vision expressed in Desired Character Statements for the Zone).

It should be noted that the assessment of a Major Development proposal only has to have regard to the policies of the Development Plan, unlike a standard development application that has to be in general accordance with the policies (especially for the Zone). A more detailed copy of the relevant policies from the Development Plan is provided at Appendix 1.

8.3.1 State Strategic Setting

The Development Plan provides a State Strategic Setting, which describes the aspirations of the Plan and sets out the Island's strategic priorities for its ongoing and future development. The following excerpt is considered to be particularly relevant to the proposed development:

Tourism

Tourism has shown growth over recent years and it is anticipated that tourism numbers will increase in the future. It is of extreme importance that Kangaroo Island Tourism is managed in a manner that ensures that the experiences of visitors continue to match their Kangaroo Island expectations and perceptions. Tourism to Kangaroo Island has historically been largely dependent on the natural resources of the Island and people's perception of the quality of these resources. The concept of a 'clean and green' image for the Island is a fundamental component of tourism and other industries, and its continuing success will be dependent on a well-managed natural environment.

A range of sustainable tourism facilities, accommodation and products must be developed to suit a range of visitor budgets and experiences. However, tourism development must also consider the impact of increasing numbers on the natural environment so as not to diminish the very reason that attracts so many visitors to the Island in the first instance. With the international growth in the nature-based tourism market, Kangaroo Island is well placed and has the potential to be one of Australia's leading eco-tourism destinations.

It is expected that the Island will continue to develop as a pre-eminent sustainable, nature-based tourism destination, but there is also a need to provide opportunities in other tourism markets around the themes of outdoor adventure and leisure activities, the coast, niche food and wine products, heritage and culture. These markets should add depth to the Island's appeal as a visitor destination and encourage longer stays.

8.3.2 Council Wide Provisions

Tourism Development

The Objectives for this type of development are:

1. Environmentally sustainable and innovative tourism development.
2. Tourism development that assists in the conservation, interpretation and public appreciation of significant natural and cultural features including State or local heritage places.
3. Tourism development that sustains or enhances the local character, visual amenity and appeal of the area.
4. Tourism development that protects areas of exceptional natural value, allows for appropriate levels of visitation, and demonstrates a high quality environmental analysis and design response which enhances environmental values.
5. Tourism development in rural areas that does not adversely affect the use of agricultural land for primary production.
6. Tourism development that contributes to local communities by adding vitality to neighbouring townships, regions and settlements.
7. Increased opportunities for visitors to stay overnight.
8. Ensure new development, together with associated bushfire management minimise the threat and impact of bushfires on life and property while protecting the environment.

8.3.3 Zoning

The site is largely contained within the Primary Production Zone, however a number of golf holes traverse the zone boundary into the Coastal Conservation Zone. The following summarises the nature and intent of each of the zones, together with a short assessment of the proposals consistency with the policy contained therein.

Primary Production Zone

The key objective of the Primary Production Zone is to ensure the long term continuation of sustainable and economic primary production on Kangaroo Island. Nevertheless, the nature of the Zone also lends itself to tourism activities. The following comprises some of the key excerpts of the Desired Character Statement for the Zone, which is considered particularly relevant to the proposal:

The farming and rural character of Kangaroo Island is a feature which is a strong economic and tourism asset. It is envisaged that development within the zone will reinforce these roles. Inappropriate development, unsightly structures, indiscriminate land fragmentation for purposes other than primary production and poor land management will quickly erode its economic potential and special character. As such, careful control over the nature, integrity and siting of development needs to occur.

Development within the zone will retain native vegetation and protect existing ecosystems to ensure the heritage and environmental significance of Kangaroo Island can continue to underpin the Island's character and values.

The intent of the zone is primarily to strengthen the role and value of primary production. However, the opportunity also exists to provide tourist accommodation and tourism activities within the zone where such development is designed to put people back in touch with the natural and rural environment, or would positively contribute to the Island's tourism experiences.

It is expected that such development will cater primarily for the "get away" nature or adventure orientated market which is environmentally conscious, although other niche tourism development opportunities will also be considered where they strengthen the Island's tourism appeal.

The design and siting of tourist accommodation should ensure emphasis is given to raising consciousness and appreciation of natural surroundings and should be sited where it does not undermine the primary intent of the zone for primary production. Tourism development will be encouraged in areas that are of low capability for farming or horticulture.

The policies of the Zone generally relate to farming activities, although tourism (i.e. activities, facilities and accommodation) is a form of development envisaged for the Zone. Specific policies that relate to tourism include:

- **Principle of Development Control 17:** Tourism developments should not exceed a building height of 6.5 metres above natural ground level.
- **Principle of Development Control 18:** Tourism development:
 - (a) should not be located on land that has a high capability for farming or horticulture, or compromise established rural activities; and
 - (b) may comprise a range of tourist accommodation, recreational and leisure activities at various scales that complement the existing tourism offerings in the locality.

Coastal Conservation Zone

Parts of the proposed golf course are proposed to be located within the Coastal Conservation Zone to maximise the striking views of the Southern Ocean for a scenic golf experience. The following key excerpts are taken from the Desired Character Statement:

The zone defines the coastal areas of high landscape or conservation value and incorporates policy to ensure the preservation of the coastal landscape resource. However, the coastal environment plays an important role in Kangaroo Island's economy and the tourist attraction provided by the coastal environment, coastal scenery and abundant wildlife is expected to see growth in visitor numbers that will need to be appropriately managed and catered for.

The provision of facilities, including tourist accommodation and recreational facilities, may be established in the zone provided they are sited and designed in a manner that is subservient to the natural and coastal environment and adverse impact on natural features, landscapes, habitats and cultural assets is minimised.

The preference is that tourism development, including any associated access driveways and ancillary structures, be located on cleared areas or areas where environmental improvements can be achieved. Development should be located away from fragile coastal environments and significant habitat or breeding grounds.

In order to reinforce the Island's scenic and landscape experiences, tourism development should maintain a strong visual impression of a sparsely developed or undeveloped coastline from public roads and land-based vantage points. The design and siting of tourist accommodation should ensure emphasis is given to raising consciousness and appreciation of the natural, rural, coastal and cultural surroundings. It is envisaged that development is not undertaken on coastal dune systems, tidal wetlands, mangroves, sand dunes or other environmentally sensitive areas.

The policies of the Zone generally relate to coastal protection and conservation works, although tourism (i.e. facilities and accommodation) is a form of development envisaged for the Zone. Specific policies that relate to the proposal include:

- **Principle of Development Control 6:** Development should be designed and sited to be compatible with conservation and enhancement of the coastal environment and scenic beauty of the zone.
- **Principle of Development Control 9:** Where public access is necessary in sensitive locations, walkways and fencing should be provided to effectively control access.
- **Principle of Development Control 11:** Development should not prejudice the landscape quality and natural bushland of the zone.

Conclusion

The Kangaroo Island Council Development Plan balances both the need for economic development and growth (particularly tourism), with the need to preserve the Island's iconic natural environment (especially in sensitive coastal locations). The proposed golf course and resort facility is considered to be sympathetic to this balance, in that it offers a new opportunity for tourism and economic growth on the Island, whilst seeking to preserve the environmental and landscape characteristics of the site. A key aim of the proposal is to provide a golfing experience in a natural and wild setting (i.e. 'on the edge').

Primary production is not a viable or sustainable use of the site (i.e. marginal grazing country at best) and a change to a tourism/recreation use would result in improved management of the land (especially pest plant and animal control). Whilst residential allotments form part of the proposal, in a zone where domestic residences (and associated land division) are not generally permitted, these are more likely to be used as tourist accommodation to compliment the resort.

The proposal has been designed to minimise vegetation clearance and intrusion into the coastal zone. In particular, remnant vegetation would be incorporated into the design (especially to screen or act as a backdrop to buildings and structures) and rehabilitated. The undulating topography of the site would also be used to help 'embed' the resort buildings into the landscape. The use of natural building materials and colours would also be used to minimise visual impact. Buildings would also be designed using sustainability principles (especially for water and energy efficiency). The layout of the golf course would replace introduced grasslands and weeds with turf. Revegetation and landscaping would be used to increase native vegetation communities and habitat.

Overall, the proposal is considered to appropriately respond to the provisions of the Kangaroo Island Council's Development Plan, and in particular the intent of the Primary Production Zone and Coastal Conservation Zone in providing for sympathetic tourism development in an appropriate location.

8.4 BUILDING RULES

This Assessment Report does not include an assessment of the proposal against the provisions of the Building Rules under the *Development Act 1993*. If the Governor grants a development authorisation, further assessment of the proposed development against the Building Rules will be required. The proponent may choose to seek building rules consent from the Kangaroo Island Council or from a private building rules certifier.

Full development authorisation (equivalent to a development approval under Part 1 of the Act) would only be made by the Governor after the Council or a private certifier has assessed and certified that any 'building work' under the Act, complies with the Building Rules. The Building Rules certification must be consistent with the development authorisation.

The following structures would need Building Rules Consent (and Certificate of Occupancy) to be obtained, prior to the commencement of operations on the site:

- a. Club house and tourist accommodation lodges / suites.
- b. Staff accommodation buildings.
- c. Maintenance buildings.
- d. Water storage dam.
- e. Any proposed dwellings and associated outbuildings.

All construction and building work is expected to meet relevant Australian Standards and the provisions of the Minister's Code: Undertaking Development in Bushfire Protection Areas (Minister for Planning, amended 2012), where appropriate.

8.5 ENVIRONMENT PROTECTION ACT

The objects of the *Environment Protection Act 1993* are to:

- (a) *promote the principles of ecologically sustainable development; and*
- (b) *ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development (and to prevent, reduce, minimise and, where practicable, eliminate harm to the environment).*

The proponent would need to meet the General Environmental Duty of the Act (i.e. as described in section 25) to not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm. Proper weight needs to be given to both long and short term environmental, social, economic and equity considerations in deciding all matters relating to environmental protection, restoration and enhancement. The Environment Protection Authority (EPA) is required to apply a precautionary approach to the assessment of risk of environmental harm and ensure that all aspects of environmental quality affected are considered in decisions relating to the environment.

The following Environment Protection Policies also need to be met:

- *Environment Protection (Water Quality) Policy 2015.*
- *Environment Protection (Air Quality) Policy 1994.*
- *Environment Protection (Noise) Policy 2007.*
- *Environment Protection (Waste to Resources) Policy 2010.*

In regard to potential site contamination, the *National Environmental Protection (Assessment of Site Contamination) Measure 1999* applies to the investigation, reporting and management of site contamination.

A range of EPA codes, standards and guidelines would also be relevant to the proposal.

Based on the information provided in the PER and Response document, no activities of environmental significance (i.e. as defined in Schedule 1 of the Act) are proposed. However, before making a decision on the proposed development the Governor needs to have regard to the objects of the Act, the General Environmental Duty and any relevant environment protection policies.

8.6 OTHER RELEVANT POLICY AND LEGISLATION

8.6.1 Native Vegetation Act and Regulations

Under the Regulations of the *Native Vegetation Act 1991*, the proponent is exempt from the requirement to obtain approval for vegetation clearance as the proposal has been the subject of a PER and the Native Vegetation Council (NVC) has been formally consulted and its comments considered in the preparation of this report. Thus, no statutory approval for vegetation clearance is required, although suitable offset provisions for such clearance needs to be to the satisfaction of the NVC.

Accordingly, if the Governor approves the development, the proponent will need to negotiate with the NVC a suitable form of offset in the form of a Significant Environmental Benefit (SEB), prior to the clearance or modification of native vegetation in the development area. If the SEB is proposed to be undertaken on-ground, an associated management plan also requires NVC approval. The proponent will need to seek direction from the NVC on how to achieve the required SEB.

8.6.2 Aboriginal Heritage Act

The Aboriginal Affairs and Reconciliation Division of the Department of State Development, administers the *Aboriginal Heritage Act 1988*, the object of which is to provide for the protection and preservation of the Aboriginal heritage in South Australia. The Act requires that in the event archaeological items are uncovered during earthmoving, the Department be contacted immediately. The proponent would need to ensure construction contractors are aware of this requirement.

Any approval would need to ensure that during the construction phase an appropriated monitoring and reporting regime is in place, and that any potential archaeological finds (i.e. Aboriginal sites, objects or remains) are reported in accordance with the requirements of the Act.

8.6.3 Natural Resources Management Act

The *Natural Resources Management Act 2004* seeks the sustainable and integrated management and protection of the State's natural resources. The Act has a wide remit to facilitate integrated and sustainable natural resource management, especially the control of introduced plants and animals. The Act is administered by the Department of Environment, Water and Natural Resources (DEWNR), with implementation the responsibility of regional Natural Resources Management Boards. Natural Resources Kangaroo Island deliver a range of programs and projects, on behalf of the Kangaroo Island NRM Board and DEWNR, in accordance with the region's Natural Resources Management Plan. In particular, Natural Resources KI works with landholders on land and water management aspects, especially bush management and their legal responsibilities to control pest plants and animals. The proponent would need to consult with Natural Resources KI during the preparation of certain management plans.

8.6.4 Crown Land Management Act

DEWNR administers Crown Land in South Australia, under the *Crown Land Management Act 2009*, for the benefit of South Australians and seeks to achieve a balance between the social, economic and environmental needs of the community.

Part of the proposal involves developing golf holes within the Crown land coastal reserve adjacent the coast. DEWNR has indicated that the Minister for Sustainability, Environment and Conservation has approved, in principle, the proponent being given access to Crown land, subject to the negotiation of an appropriate lease or licence and conditions. However, the Minister noted the potential liability from development close to the cliff face that would need to be appropriately managed.

If the proposed development is approved, the proponent would need to seek consent from the Minister to:

- Purchase or lease the land to which the conservation lease is attached in order to secure the Conservation Lease.
- Undertake the proposed activity contrary to the Conservation Lease.
- Secure tenure over any other Crown land affected by the proposal.

8.6.5 Environment Protection & Biodiversity Conservation Act (Cth)

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) establishes an environmental assessment and approval system based on matters of national environmental significance that is separate and distinct from State systems. The Act enables proponents to seek a determination from the Commonwealth Environment Minister regarding whether or not their action is a 'controlled action' and generally subject to Commonwealth assessment and approval processes.

The proponent submitted a referral, with details on the likely impacts of the proposal, to the Commonwealth Department of the Environment for a determination as to whether the proposal required assessment under the EPBC Act. The proposal was determined to be a 'controlled action', due to potential impacts on listed threatened species (i.e. Southern Brown Bandicoot – Eastern population) and listed migratory species (i.e. Eastern Osprey and White-bellied Sea-eagle).

The Commonwealth Government also decided the proposal would need to be assessed through the State Government (Major Development) assessment process, under the Bilateral Agreement between the Commonwealth and the State of South Australia. The Commonwealth Department of the Environment provided input to this Assessment Report.

9 CONCLUSION

The proposed golf course and resort development would provide a key tourist destination for Kangaroo Island (especially for interstate and overseas visitors) that would meet the strategic needs of the Island and for South Australia. Importantly, the need for a high profile tourist destination aligns with the strategic directions promoted by South Australia's Strategic Plan and the South Australian Planning Strategy (Kangaroo Island Plan and Structure Plan). The proposal is consistent with the State's tourism and planning strategies and policies promoted by the Kangaroo Island Futures Authority (and prescribed in the recent Kangaroo Island Sustainable Futures Development Plan Amendment). In particular, the proposal would provide an international standard golf course (which the Island does not currently have), a clubhouse (including a top level restaurant), a conference facility and 3-4 star tourist accommodation.

From a range of possible locations, the proposed site was chosen because of its spectacular coastal views and a mix of cleared agricultural land and remnant vegetation within which the development could be integrated. The site is strategically located between the Island's two main townships (i.e. Penneshaw and Kingscote), with convenient access off Hog Bay Road, the main route between the two towns. Minor upgrades to the Hog Bay Road – Davies Road intersection and to Davies Road would be required to ensure road safety and ease of traffic movements. An extension of the existing power and water supply networks can meet demand from the proposal, supplemented by alternative sources (such as wastewater reuse, stormwater harvesting and solar power)

Outside views of the site, especially from Hog Bay Road, are restricted by distance, a natural ridgeline and native vegetation. A sufficient buffer distance is provided from prominent view points, especially the Prospect Hill Lookout on Mount Thisby. Remnant vegetation and the undulating topography of the site would be used to minimise the visual impact of buildings and structures on the landscape. The use of natural materials and colours would help buildings blend with the environment.

The proposal has been designed to be sympathetic with the natural coastal environment and to meet the local policy requirements of the Kangaroo Island Development Plan. Whilst the land is zoned for primary production uses, the site has limited agricultural value and the previous grazing use ceased around 20 years ago, as it was generally unviable. A golf course resort would be a more sustainable use, which would protect and retain the coastal environment and landscape values of the site. Vegetation clearance would be minimised, remnant vegetation rehabilitated and substantial areas of the site revegetated or landscaped. Coastal dune erosion would be stabilised and pest plants and animals controlled. Revegetation and rehabilitation would help offset any vegetation clearance (or habitat disturbance), plus offsetting greenhouse gas emissions and the development's carbon footprint. The development would be designed, constructed and operated within a sustainability framework.

Whilst several species of National and State conservation significance have been identified as occurring within the locality, the site does not provide core habitat for any threatened species. In particular, the Eastern Osprey and White-bellied Sea-eagle have been recorded as nesting within five kilometres of the site, but are only likely to be transitory through the site searching for food. The Southern Brown Bandicoot (Eastern)

has been recorded in remnant vegetation adjoining the eastern boundary and may possibly venture into the site to forage. The Heath Goanna and several bird species of State significance have been recorded on the site, but their population numbers and habitat use has not been fully determined. The proposal has been designed and would be managed to avoid or minimise impacts on the potential habitat for such species (including the establishment of buffer zones). Environmental restoration and rehabilitation works may encourage greater use of the site by native fauna. Monitoring would be undertaken to collect survey data on all species that may use the site.

A golf course and resort would attract certain native wildlife, due to the provision of food, water and shelter. Some species may increase to 'nuisance' levels. Currently, 'mobs' of kangaroos and wallabies inhabit the site, especially to graze on introduced grassland. Whilst they would be an essential part of the visitor experience, the populations would need to be managed appropriately in order to maintain the course, revegetated/landscaped areas and remnant vegetation.

There would be limited intrusion of the golf course into the coastal dunes, whilst still providing dramatic views from a small number of sensitively located holes towards the edge of the coastline. Cliff stability and sand dune erosion risks would need to be considered during the final design of this part of the course. Public access along the coast (especially within the Crown land coastal reserve) would be maintained and managed.

During construction there is a potential that sites of Aboriginal heritage may be uncovered. Potential sites where heritage artefacts could be present have been identified and will either be avoided or carefully managed during earthworks and excavations. Protocols would be put in place to ensure any discoveries are reported to the appropriate authorities. Water and wind erosion (including dust) would be managed to prevent discharges to the coastal and marine environment. The golf course would be designed and irrigated to ensure the local hydrology should not be significantly affected, especially to avoid a groundwater mound developing. Bushfire risk would be managed using buffers to buildings, an extensive sprinkler system and contingencies for emergencies.

The area surrounding the proposed site is rural/semi-rural in nature and has a low population density. Several farming and rural living residences may be affected by the development, especially during the construction period. In particular, dust and noise emissions would be suitably controlled. Traffic volumes and frequencies would increase, during both construction and operation, but not substantially. Road upgrades would be undertaken to ensure efficient traffic movements and road safety on affected roads.

The impacts from the construction and operation of the proposed development would be suitably addressed through Environmental Management and Monitoring Plans, plus a range of specific Management Plans. These plans would need to be prepared in consultation with a range of stakeholders, including the Kangaroo Island Council and relevant Government agencies.

10 RECOMMENDATIONS

Should the Governor grant a provisional development authorisation, the approval should be based on the following requirements –

PLANNING CONDITIONS

General

1. For the purposes of Section 48(11)(b) of the *Development Act 1993*, the proponent shall commence the development by substantial work on the site of the development within two years of the date of this authorisation, failing which the authorisation may be cancelled.
2. The proponent shall have completed the development within five years of the date of this authorisation, failing which the authorisation may be cancelled.
3. In accordance with conditions 1 and 2 above, the development once commenced shall be completed in accordance with the following:
 - a. Essential infrastructure works, including power and water supply to the site, shall commence prior to any other works.
 - b. Works on the golf course shall commence within 6 months of the completion of infrastructure works, and shall be completed prior to the commencement of any residential development on the site.
 - c. The clubhouse and tourist accommodation must be commenced within 6 months of completion of the golf course, excluding land division for that purpose.
 - d. All external and internal road upgrades, including car parking areas, shall be commenced and completed prior to occupation of development on the site, and prior to commencing commercial operations.

Prior to the Commencement of Construction Works

The following information, where relevant, shall be submitted for further assessment and approval by the Minister for Planning, prior to the commencement of construction works:

4. Building Rules compliance, following assessment and certification by a private certifier, the Kangaroo Island Council or by a person determined by the Minister for Planning, as complying with the provisions of the Building Rules (or the Building Rules as modified according to criteria prescribed by the Development Regulations 2008). For the purposes of this condition 'building work' does not include plant and equipment or temporary buildings that are not permanently attached to the land (refer to relevant Advisory Notes below).
5. Final detailed plans for each component of the development (including site plans, floor plans, elevations, cross-sections, rendered perspectives, final golf course layout and other relevant specifications).
6. Final plans, drawings, specifications and financial and maintenance arrangements

(including Deeds of Agreement) associated with road infrastructure upgrades for the intersection of Hog Bay Road and Davies Road, prepared in consultation with the Department of Planning, Transport & Infrastructure and the Kangaroo Island Council.

7. Final plans, drawings, specifications and financial and maintenance arrangements (including Deeds of Agreement) associated with road infrastructure upgrades for Davies Road and Cathers Road, prepared to the reasonable satisfaction of the Kangaroo Island Council.
8. A Preliminary Site Investigation / Site History Report to determine whether a potentially contaminating land use has occurred on the site in the past, prepared in consultation with the Environment Protection Authority.
9. A sand drift erosion and cliff stability investigation shall be completed, in consultation with the Department of Environment, Water and Natural Resources, and the finding included into the final design of the golf course.
10. A Construction Environmental Management and Monitoring Plan (CEMMP), prepared in consultation with the Environment Protection Authority, the Department of Environment Water and Natural Resources and the Kangaroo Island Council. The CEMMP must incorporate measures to address (but not be limited to) the following matters:
 - a. traffic management for the duration of demolition and construction;
 - b. construction and works noise management to ensure compliance with the Environment Protection (Noise) Policy 2007;
 - c. management of air quality (including odour and dust);
 - d. sequencing of development (including construction timelines for works on site, as well as periods and hours of construction);
 - e. occupational health and safety matters;
 - f. bio-security and wash down procedures to minimise the transfer of pests and pathogens during the construction process;
 - g. soils (including fill importation), stockpile management and prevention of soil contamination (such as from chemical use and storage, pest plants and pathogens);
 - h. soil erosion and sediment control (including rehabilitation and stabilisation of land as construction progresses);
 - i. stormwater management, prior to implementation of a permanent solution;
 - j. groundwater (including prevention of groundwater contamination);
 - k. site contamination and remediation (where required);
 - l. Aboriginal Heritage to ensure compliance with the *Aboriginal Heritage Act 1988*;
 - m. waste management for all waste streams and overall site clean-up;
 - n. use and storage of chemicals, oil, construction-related hazardous substances and other materials that have the potential to contaminate the environment (including proposed emergency responses); and
 - o. site security, fencing and safety (including the management of public access and local traffic).

11. An Integrated Water Management Plan (IWMP), prepared in consultation with the Environment Protection Authority and the Department of Environment, Water and Natural Resources. The plan must incorporate measures and actions to address (but not be limited to) the following issues:
 - a. a site plan identifying all water related features and infrastructure for the storage, treatment and/or reuse of potable water, stormwater, wastewater and irrigation water;
 - b. water balance information, including the total water needs of all components of the development;
 - c. observation wells and a water level and water quality monitoring program;
 - d. total wastewater generation from the development (based on projected wastewater volumes per day);
 - e. predicted greywater generation volumes and a description of how all greywater will be collected, stored and re-used on site (if greywater is to be collected separately to wastewater);
 - f. predicted evaporative losses from water and wastewater storages;
 - g. a description of how all wastewater will be collected, stored and re-used on site (including the capacity of the system);
 - h. a Reclaimed Water Irrigation Management Plan, prepared in accordance with the EPA Guideline 'Wastewater Irrigation Management Plan – a Drafting Guide for Wastewater Irrigators' (June 2009);
 - i. details of the proposed wastewater storage lagoon liners, prepared in accordance with the EPA Guideline 'Wastewater Lagoon Construction' (November 2014);
 - j. predicted stormwater generation volumes and details of stormwater quality improvements, including the location and sizing of bio-retention swales and basins, anticipated quality improvements and details of any other proposed stormwater quality treatment features;
 - k. management of the potential impacts from nutrient and chemical runoff from the golf course, including details regarding the management of pesticides and herbicides, in accordance with the EPA 'Guidelines for Responsible Pesticide Use' (December 2005) and the EPA 'Safe and Effective Pesticide Use: a Handbook for Commercial Spray Operators';
 - l. control of the spread of turf grasses; and
 - m. contingencies to address any detrimental effects, especially on local hydrology.

During Construction Works and Prior to Operation of the Development

12. All works shall be undertaken in accordance with the approved plans, drawings, specifications and other documentation provided (and approved by the Minister for Planning where required) in accordance with conditions 4 to 11 listed above.

The following information, where relevant, shall be submitted for further assessment and approval by the Minister for Planning, prior to the commencement of operations:

13. An Operational Environmental Management and Monitoring Plan (OEMMP), prepared in consultation with the Environment Protection Authority, the Department of Environment Water and Natural Resources and the Kangaroo

Island Council. The OEMMP must incorporate measures to address (but not be limited to) the following matters:

- a. general operational noise management (such as from machinery noise), to ensure compliance with the Environment Protection (Noise) Policy 2007;
 - b. a Waste Management strategy detailing the collection, storage and disposal of waste (for all waste streams) to comply with the Environment Protection (Waste to Resources) Policy 2010;
 - c. wastewater collection and treatment to comply with general obligations of the Environment Protection (Water Quality) Policy 2015;
 - d. traffic management associated with the preparation of events;
 - e. noise from live and/or recorded music and public address systems for events;
 - f. a Kangaroo and Wallaby Management Strategy (including any proposed site fencing and implementation of natural barriers);
 - g. emergency and evacuation procedures (including a Fire Management Plan prepared in consultation with the Country Fire Service); and
 - h. ongoing sustainability initiatives (including power, water, flora and fauna management) and details of proposed methods for ongoing monitoring and reporting.
14. A Native Vegetation Management, Rehabilitation and Revegetation Plan shall be prepared to the reasonable satisfaction of the Minister for Planning (in consultation with the Department of Environment, Water and Natural Resources Native Vegetation Management Unit, and Natural Resources Kangaroo Island). The plan also should include details on how weeds and pests are to be managed following commencement of operations.

During Operation of the Development

15. Operations on the site shall be undertaken in accordance with all plans and details submitted as part of the Major Development Application, and where provided (and endorsed by the Minister for Planning where required) in accordance with conditions 4 to 13 as listed above.
16. The development/site shall be maintained in a serviceable condition and operated in an orderly manner at all times consistent with conditions of approval.
17. Undeveloped allotments shall be maintained in a neat and tidy condition at all times, with soil surfaces stabilised to minimise erosion.
18. Recycled water (wastewater, greywater and stormwater) must be stored separately from the main water supply storage.
19. All liquids that have the ability to cause environmental harm must be stored within a bunded compound that has a capacity of at least 120% of the volume of the largest container, in accordance with the EPA 'Bunding and Spill Management Guidelines' (2007).

ADVISORY NOTES

1. Approvals will be required for all components of the development not hereby approved, including:
 - the resort clubhouse building and associated facilities;
 - the tourist accommodation (lodges and suites);
 - storage sheds and other storage structures;
 - the water storage dam; and
 - any land division to create certificates of title for separate allotments.

In respect of land division documentation, surveyed plans sufficient to satisfy Lands Titles Office procedure should be provided.

2. Further designs and plans (i.e. subject to separate applications to the Minister for Planning or the Development Assessment Commission, as the Governor's delegate, will be required should further development approval be sought for dwellings or additional tourist accommodation.
3. Pursuant to Development Regulation 64, the applicant is advised that the Kangaroo Island Council or private certifier conducting a Building Rules assessment must-
 - a. provide to the Minister a certification in the form set out in Schedule 12A of the Development Regulations 2008 in relation to the building works in question; and
 - b. to the extent that may be relevant and appropriate-
 - (i) issue a Schedule of Essential Safety Provisions under Division 4 of Part 12; and
 - (ii) assign a classification of the building under these regulations; and
 - (iii) ensure that the appropriate levy has been paid under the *Construction Industry Training Fund Act 1993*.

Regulation 64 of the Development Regulations 2008 provides further information about the type and quantity of all Building Rules certification documentation for Major Developments required for referral to the Minister for Planning.

4. The Kangaroo Island Council or private certifier undertaking Building Rules assessments must ensure that the assessment and certification are consistent with this provisional development authorisation (including any Conditions or Advisory Notes that apply in relation to this provisional development authorisation).
5. Should the applicant wish to vary the Major Development or any of the components of the Major Development, an application may be submitted, provided that the development application variation remains within the ambit of the Public Environmental Report and Assessment Report referred to in this provisional development authorisation. If an application variation involves substantial changes to the proposal, pursuant to Section 47 of the *Development Act 1993*, the applicant may be required to prepare an amended Public Environmental Report for public inspection and purchase. An amended

Assessment Report may also be required to assess any new issues not covered by the original Assessment Report and a decision made by the Governor pursuant to Section 48 of the *Development Act 1993*.

6. The applicant's CEMMP and other Plans should be prepared taking into consideration (and with explicit reference to) relevant EPA policies and guideline documents, including, but not limited to:
 - a. the Environment Protection (Air Quality) Policy 1994;
 - b. the Environment Protection (Noise) Policy 2007;
 - c. the Environment Protection (Water Quality) Policy 2015;
 - d. the Environment Protection (National Pollutant Inventory) Policy 2008;
 - e. the Standard for the Production and Use of Waste Derived Fill (if applicable) (2013);
 - f. the Bunding and Spill Management Guidelines (2012);
 - g. the Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry (1999);
 - h. Handbooks for Pollution Avoidance; and
 - i. any other legislative requirements, Guidelines and Australian Standards requiring compliance.
7. All works and activities must be undertaken in accordance with the General Environmental Duty as defined in Part 4, section 25(1) of the *Environment Protection Act 1993* (which requires that a person must not undertake any activity, which pollutes, or may pollute; without taking all reasonable and practical measures to prevent or minimise harm to the environment), relevant Environment Protection Policies made under Part 5 of the *Environment Protection Act 1993* and other relevant publications and guidelines.
8. A site contamination consultant must be engaged to prepare the Preliminary Site Investigation Report, in accordance with Schedules A and B of the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM). If the report identifies that a potentially contaminating activity has occurred, an accredited Site Contamination Auditor must provide a Site Contamination Audit Report that states the site is suitable for residential use or the site does not pose unacceptable risks to human health and the environment for the proposed commercial area (e.g. short term tourist accommodation).

Statements by site contamination consultants in relation to site contamination must be clearly qualified as to the existence of site contamination at the site by specifying the land uses that were taken into account in forming that opinion as required by Section 103ZA of the *Environment Protection Act 1993*.

9. Best practice with regard to bioretention is considered to be a design which uses the guidance contained in the Cooperative Research Centre 'Water Sensitive Cities Guidelines for Stormwater Biofiltration Systems – Summary Report' (2015), available at: www.watersensitivecities.org.au. To be effective at treating stormwater on a long term basis, it is recommended that at least 50% of the plants used for bioretention are those recommended in the Report.

10. The applicant is reminded of its obligations under the Native Vegetation Regulations 2003 whereby any native vegetation clearance must be undertaken in accordance with a management plan that has been approved by the Native Vegetation Council that results in a significant environmental benefit on the property where the development is being undertaken, or a payment is made into the Native Vegetation Fund of an amount considered by the Native Vegetation Council to be sufficient to achieve a significant environmental benefit in the manner contemplated by section 21(6) of the *Native Vegetation Act 1991*, prior to any clearance occurring.
11. Kangaroos are protected under the *National Parks and Wildlife Act 1972*. South Australia has a Kangaroo Management Plan which has been approved under federal legislation, and a planning decision does not include approvals for the culling of Kangaroos, which is a separate matter to be carefully managed in consultation with the Department of Environment, Water and Natural Resources and Natural Resources Kangaroo Island.
12. The applicant is reminded of its obligations under the *Aboriginal Heritage Act 1988*, whereby any 'clearance' work that may require permission to disturb, damage or destroy Aboriginal Sites, must be undertaken with the full authorisation of the Minister for Aboriginal Affairs and Reconciliation, according to Section 23 of the Act.
13. The applicant, and all agents, employees and contractors, such as construction crews, must be conversant with the provisions of the *Aboriginal Heritage Act 1988*, particularly the requirement to immediately contact the Department of Aboriginal Affairs and Reconciliation in the event that archaeological items (especially skeletal material) are uncovered during earthmoving.
14. The applicant is reminded of its obligations under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), not to undertake any activity that could have a significant impact on any matter of National Environmental Significance, without first referring it to Commonwealth Minister for the Environment for consideration under the Act.
15. The Minister has a specific power to require testing, monitoring, auditing and reporting under Section 48C of the *Development Act 1993*.

11 REFERENCES

1. Development Assessment Commission, South Australia, *Guidelines for the Preparation of a Public Environmental Report for the Kangaroo Island Golf Course Resort Proposal by Programmed Turnpoint Pty Ltd*, July 2014.
2. Programmed Turnpoint Pty Ltd, *Public Environmental Report for Kangaroo Island Golf Resort Located at Pennington Bay, KI*. Prepared by Programmed Turnpoint Pty Ltd, April 2015.
3. Programmed Turnpoint Pty Ltd, *Kangaroo Island Golf Resort (Pennington Bay, Kangaroo Island): Response to Public Environmental Report (PER) Submissions*. Prepared by Branford Planning+Design, August 2015.

GLOSSARY

The Act	<i>Development Act 1993</i> and Regulations 2008
AHD	Australian Height Datum
AR	Assessment Report
DAC	Development Assessment Commission
DEWNR	Department of Water, Environment & Natural Resources
DPTI	Department of Planning, Transport & Infrastructure
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
NPW Act	National Parks and Wildlife Act 1972
NVC	Native Vegetation Council
PER	Public Environmental Report
RL	Relative Level
SEB	Significant Environmental Benefit

Appendix 1 – Relevant Development Plan Policies

Kangaroo Island Development Plan (Consolidated 17 September 2015)

State Strategic Setting

The Development Plan provides a State Strategic Setting, which describes the aspirations of the Plan and sets out the Island's strategic priorities for its ongoing and future development. The following excerpts are considered to be particularly relevant to the proposed development:

Economic Activity

Traditionally, the Island's economy has been based on the production of wool, cereals and some beef cattle, while industries that are growing in importance are tourism, aquaculture and forestry. The creation of economic initiatives and employment opportunities, combined with appropriate land use allocation, is sought to establish a robust and sustainable economic climate that contributes to the wellbeing of the local community.

Tourism

Tourism has shown growth over recent years and it is anticipated that tourism numbers will increase in the future. It is of extreme importance that Kangaroo Island Tourism is managed in a manner that ensures that the experiences of visitors continue to match their Kangaroo Island expectations and perceptions. Tourism to Kangaroo Island has historically been largely dependent on the natural resources of the Island and people's perception of the quality of these resources. The concept of a 'clean and green' image for the Island is a fundamental component of tourism and other industries, and its continuing success will be dependent on a well-managed natural environment.

A range of sustainable tourism facilities, accommodation and products must be developed to suit a range of visitor budgets and experiences. However, tourism development must also consider the impact of increasing numbers on the natural environment so as not to diminish the very reason that attracts so many visitors to the Island in the first instance. With the international growth in the nature-based tourism market, Kangaroo Island is well placed and has the potential to be one of Australia's leading eco-tourism destinations.

It is expected that the Island will continue to develop as a pre-eminent sustainable, nature-based tourism destination, but there is also a need to provide opportunities in other tourism markets around the themes of outdoor adventure and leisure activities, the coast, niche food and wine products, heritage and culture. These markets should add depth to the Island's appeal as a visitor destination and encourage longer stays.

Environment and Resources

Kangaroo Island offers an unspoilt Australian nature, wildlife and rural experience with the distinctive difference of an island setting. Opportunities to see Australian wildlife (including rare species) in natural habitats, the spectacular coastlines, bush landscapes

and the mystique of the Island's isolation, small population and heritage, make Kangaroo Island a compelling travel destination for local, national and international visitors. The ongoing management of the environment is required to ensure the protection of the Island's unique natural qualities and to maintain its reputation as a specialist tourist destination of national and world wide significance.

Infrastructure

The supply of three phase power is limited and an improved power supply network is essential to facilitate further economic development. Given the difficulty and expense of providing electricity from traditional sources to the area, technological improvements are likely to result in the potential for renewable energy sources (such as biomass, solar and wind power) being investigated and developed on Kangaroo Island.

Middle River Dam provides water to Kingscote and Parndana and operates at capacity during summer periods. During times of significant drought this system cannot cope with demand and subsequently other sources must be utilised. Recent investigations into water infrastructure reveal that access to an appropriate, reliable water supply for Kangaroo Island is a significant issue which will affect economic growth and quality of life on the Island. Council must work with State authorities and private developers to secure a reliable, safe and sustainable water supply for industry, the community and visitors to the Island. In addition, new development should incorporate maximum on-site water capture and storage (such as using larger water tanks) to alleviate the problems of water supply. Currently most hard waste is recycled or transported to landfill sites off the Island.

Transport

Road infrastructure is critically important to the Island. The community, tourists and businesses use the major ring route on the Island, which is now sealed. Ongoing maintenance of the roads on the Island presents a significant and potentially overwhelming financial burden on the Island's community. The upkeep of the Island's roads must be a shared commitment between the community, State and local government and the private sector to ensure the sustainable development of the Island.

Council Wide Provisions – General Section

Tourism Development

OBJECTIVES

- 1 Environmentally sustainable and innovative tourism development.
- 2 Tourism development that assists in the conservation, interpretation and public appreciation of significant natural and cultural features including State or local heritage places.
- 3 Tourism development that sustains or enhances the local character, visual amenity and appeal of the area.
- 4 Tourism development that protects areas of exceptional natural value, allows for appropriate levels of visitation, and demonstrates a high quality environmental analysis and design response which enhances environmental values.

- 5 Tourism development in rural areas that does not adversely affect the use of agricultural land for primary production.
- 6 Tourism development that contributes to local communities by adding vitality to neighbouring townships, regions and settlements.
- 7 Increased opportunities for visitors to stay overnight.
- 8 Ensure new development, together with associated bushfire management minimise the threat and impact of bushfires on life and property while protecting the environment.

PRINCIPLES OF DEVELOPMENT CONTROL

- 1 Tourism development should have a functional or locational link with its natural, cultural or historical setting.
- 2 Tourism development and any associated activities should not damage or degrade any significant natural and cultural features.
- 3 Tourism development should ensure that its scale, form and location will not overwhelm, over commercialise or detract from the intrinsic natural values of the land on which it is sited or the character of its locality.
- 4 Tourism development should, where appropriate, add to the range of services and accommodation types available in an area.
- 5 Any upgrading of infrastructure to serve tourism development should be consistent with the landscape and the intrinsic natural values of the land and the basis of its appeal.
- 6 Car parking should be designed in clusters instead of large expanses.

Tourism Development in Association with Dwelling(s)

- 7 Tourist facilities developed on the site of a dwelling should not detrimentally affect residential amenity.
- 8 Car parking for tourist accommodation associated with a dwelling should be provided at the rate of one space for each guest room or suite of rooms, and ensure that:
 - (a) parking areas are attractively developed and landscaped, or screen fenced, and do not dominate the street frontage
 - (b) the bedrooms of residential neighbours are suitably shielded from noise and headlight glare associated with guest vehicle movements
 - (c) a domestic character is retained through the scale and appearance of landscaping and paving materials that provide a suitable all-weather surface.

Tourism Development Outside Townships and Settlements

- 9 Tourist developments located within areas of high conservation value, high indigenous cultural value, high landscape quality or significant scenic beauty should demonstrate excellence in design to minimise potential impacts or intrusion.
- 10 Tourism developments in rural areas should be sited and designed to minimise adverse impacts on either of the following:
 - (a) the surrounding agricultural production or processing activities
 - (b) the natural, cultural or historical setting of the area.
- 11 Buildings and structures to accommodate tourists and associated activities should:
 - (a) not exceed a building height of 6.5 metres (from natural ground level)
 - (b) have a minimum setback of 100 metres from any of the following:
 - (i) public roads or be no closer to a public road than existing buildings on the subject land, whichever is the lesser
 - (ii) adjoining allotment boundaries
 - (iii) the high water mark

(iv) cliff faces

unless it can be demonstrated that a lesser setback would achieve one or more of the following:

(v) will achieve a superior outcome in respect to the requirements of the relevant zone, policy area or precinct than if the minimum setback was applied

(vi) would assist in avoiding areas of high value remnant native vegetation

(vii) would provide a comparatively safer location in respect to exposure to bushfire hazard, including along access roadways

(viii) would not result in unacceptable exposure to coastal flood and erosion process or stormwater inundation.

12 Development providing accommodation for tourists should be designed to minimise the potential for buildings to be converted into or used as a dwelling(s) where:

(a) if the development comprises multiple tourist accommodation units – by ensuring that facilities, access driveways, parking areas, amenities and the like are shared

(b) if the development involves a single accommodation unit on a site or allotment in the Coastal Conservation Zone, Conservation Zone or Water Protection Zone, one or more of the following characteristics is evident:

(i) the structure provides basic shelter and limited internal space (eg cabin, hikers-hut)

(ii) one or more of the functional areas typically found in a dwelling (eg, laundry, kitchen) is absent

(iii) the structure is of a temporary or semi-permanent nature.

13 Development comprising multiple tourist accommodation units (including any facilities and activities for use by guests and visitors, including conference facilities) should:

(a) ensure buildings and structures are clustered on the same allotment

(b) for larger scale developments (ie those proposing or resulting in more than 25 accommodation units), have direct or convenient access to a sealed public road.

14 Tourism developments in rural areas:

(a) should primarily be developed in association with one or more of the following:

(i) agricultural, horticultural, viticultural or winery development

(ii) heritage places and areas

(iii) public open space and reserves

(iv) walking and cycling trails

(v) interpretive infrastructure and signs

(vi) rural industries that primarily use ingredients sourced primary from the Island's farms and coastal waters

(b) may involve the provision of facilities and accommodation associated with outdoor adventure, recreation and leisure activities.

15 Where appropriate, tourism developments in areas outside townships and settlements should:

(a) adapt and upgrade existing buildings of heritage value

(b) seek to improve conditions in disturbed or degraded areas on the site.

16 Advertisements associated with tourism developments should:

(a) not exceed 0.5 square metres in area for each display

(b) be limited to no more than two per site

(c) be located on the same site as the tourist development

(d) not be internally illuminated.

- 17 Tourism development in rural areas should occur only where it:
- (a) incorporates a separation distance or buffers to avoid conflict with existing rural industries or agriculture or otherwise is designed to overcome the potential impacts associated with the adjoining land use (such as noise, dust, spray drift, odour and traffic)
 - (b) will not give rise to demands for infrastructure and services, especially on public lands, that are inappropriate to the purpose of the zone and/or policy area.
- 18 Tourism development, particularly in remote areas should be designed to minimise energy and water demands and incorporate alternative, sustainable technologies that use renewable energy sources and/or treat and reuse stormwater and wastewater to minimise reliance on mains services.
- 19 Natural features, signs and walkways should be used to manage and minimise potential risks of visitors damaging areas of cultural or natural significance, fragile areas, and areas of highest environmental value.
- 20 The visual and ambient impact of vehicles should be minimised by placing roadways and parking areas in unobtrusive locations.

Primary Production Zone

OBJECTIVES

1. The long term continuation of primary production.
2. Economically productive, efficient and environmentally sustainable primary production.
3. Allotments of a size and configuration that promote the efficient use of land for primary production.
4. Protection of primary production from encroachment by incompatible land uses and protection of scenic qualities of rural landscapes.
5. Accommodation of wind farms and ancillary development.
6. Development that contributes to the desired character of the zone.

DESIRED CHARACTER

The farming and rural character of Kangaroo Island is a feature which is a strong economic and tourism asset. It is envisaged that development within the zone will reinforce these roles. Inappropriate development, unsightly structures, indiscriminate land fragmentation for purposes other than primary production and poor land management will quickly erode its economic potential and special character. As such, careful control over the nature, integrity and siting of development needs to occur.

Development within the zone will retain native vegetation and protect existing ecosystems to ensure the heritage and environmental significance of Kangaroo Island can continue to underpin the Island's character and values.

The Island's agricultural economy, landscape character and natural environmental features need to be protected based on best practice farm management. The Kangaroo Island Natural Resource Management Board's Natural Resources Management Plan provides a useful framework for the preparation of farm management plans. Industry and warehousing may be developed where it supports primary production, processing, storage and distribution of local primary produce.

Wind farms and ancillary development such as substations, maintenance sheds, access roads and connecting power-lines (including to the National Electricity Grid) are envisaged within the zone and constitute a component of the zone's desired character. These facilities will need to be located in areas where they can take advantage of the natural resource upon which they rely and, as a consequence, components (particularly turbines) may need to be:

- located in visually prominent locations such as ridgelines
- visible from scenic routes and valuable scenic and environmental areas
- located closer to roads than envisaged by generic setback policy.

This, coupled with the large scale of these facilities (in terms of both height and spread of components), renders it difficult to mitigate the visual impacts of wind farms to the degree expected of other types of development. Subject to implementation of management techniques set out by general / council wide policy regarding renewable energy facilities, these visual impacts are to be accepted in pursuit of benefits derived from increased generation of renewable energy.

The Island's land ownership pattern generally reflects relatively large holdings which should be maintained. The creation of smaller titles will only be considered in response to genuine value added economic opportunities directly associated with primary production. The creation of any smaller allotments will be linked to outcomes which reinforce economic productivity and environmental improvement with regard to primary production and which is sensitively designed and sited in keeping with the areas' natural and rural character. It is intended that the zone caters for a second dwelling on an allotment where there is a demonstrated need for this form of housing to accommodate on-site workers, but this is not to result in the further division of the land. The second dwelling will need to be designed and located to minimise the potential for adverse impacts on farm activities and the rural landscape. Land fragmentation for the purposes of rural living is not desired within the zone.

The intent of the zone is primarily to strengthen the role and value of primary production. The quality of Island produce is high and the burgeoning food and wine industries is a testimony to this. However, the opportunity also exists to provide tourist accommodation and tourism activities within the zone where such development is designed to put people back in touch with the natural and rural environment, or would positively contribute to the Island's tourism experiences. It is expected that such development will cater primarily for the "get away" nature or adventure orientated market which is environmentally conscious, although other niche tourism development opportunities will also be considered where they strengthen the Island's tourism appeal.

The design and siting of tourist accommodation should ensure emphasis is given to raising consciousness and appreciation of natural surroundings and should be sited where it does not undermine the primary intent of the zone for primary production. Tourism development will be encouraged in areas that are of low capability for farming or horticulture.

The introduction of home based industry within the zone is one means of achieving value added economic development. The intention is to allow for a range of home based industries where the primary components and ingredients used to create the industry products are derived from the land or from the surrounding rural locality. Home based industry is not meant to involve the servicing, repair or restoration of vehicles or vehicle parts, the carrying out of manufacturing activities at the scale of general, light and service industry. The policies stated below aim to ensure that home based industry development is undertaken in a manner compatible with the rural nature of the zone. Examples of the types of home based industries which may be appropriate within the zone include metwurst smoking, storage, craft production, woodcarving, pottery making, needlework and jam production.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

1 The following forms of development are envisaged in the zone:

- bulk handling and storage facility
- conference facility (in association with tourist accommodation or tourism facilities)
- dairy farming
- farming
- farm building
- home based industry
- horticulture
- intensive animal keeping
- land-based aquaculture
- tourist accommodation (including through the diversification of existing farming activities and conversion of farm buildings)
- tourism activities and facilities
- wind farm and ancillary development
- wind monitoring mast and ancillary development.

2 Development listed as non-complying is generally inappropriate and not acceptable unless it can be demonstrated that it does not undermine the objectives and principles of the Development Plan.

3 Wind farms and ancillary development should be located in areas which provide opportunity for harvesting of wind and efficient generation of electricity and may therefore be sited:

- (a) in visually prominent locations
- (b) closer to roads than envisaged by generic setback policy.

4 Industry and warehousing should only be developed if it supports primary production, processing, storage and distribution of local primary produce or products produced on the same site, and should be developed where:

- (a) it has a direct relationship with primary production
- (b) it is unlikely to limit or inhibit the use of adjoining land for primary production
- (c) the particular use requires a site in proximity to a particular natural resource or other product or materials sourced from the locality

- (d) it will not result in the alienation of land or water resources identified as significant for primary production or ecological reasons
- (e) the use would be inappropriate within a township
- (f) the capacity of the infrastructure, including roads, is capable of supporting the use without detriment to existing users.

5 A shop should be:

- (a) ancillary to:
 - (i) primary production or processing uses
 - (ii) tourist accommodation or other tourist development
- (b) located on the same site as the primary use.

6 Buildings should primarily be limited to farm buildings, a detached dwelling and/or short-term workers accommodation associated with primary production on the allotment and residential outbuildings that are:

- (a) grouped together on the allotment and set back from allotment boundaries to minimise the visual impact of buildings on the landscape as viewed from public roads
- (b) screened from public roads and adjacent land by existing vegetation or landscaped buffers.

7 A dwelling should only be developed if:

- (a) there is a demonstrated connection with farming or other primary production
- (b) the location of the dwelling will not inhibit the continuation of farming, other primary production or other development that is in keeping with the provisions of the zone
- (c) it is located more than 500 metres from an existing intensive animal keeping operation unless used in association with that activity
- (d) it does not result in more than one dwelling per allotment.

8 Not more than one dwelling should be erected on any allotment unless the following criteria are met:

- (a) the allotment area is 40 hectares or greater
- (b) the allotment is used as an operative farm
- (c) the dwelling is for a managers residence, farm hand or for short term workers accommodation and:
 - (i) is located within 100 metres of an existing dwelling on the same allotment
 - (ii) is of universal design to support 'ageing in place'
 - (iii) shares a common power and water supply (where a mains water supply is connected) and waste water treatment system (upgraded to meet current environmental and health requirements) with the existing dwelling
 - (iv) shares the existing dwelling's access/egress point to the road network
 - (v) is located at least 40 metres from all adjoining property boundaries
 - (vi) does not result in more than two dwellings being erected on the allotment.

9 Domestic outbuildings should be ancillary to a dwelling and be no greater than 115 square metres in area.

10 Industrial development should not be undertaken unless it involves the handling and processing of local primary products and allied activities.

11 Horticulture development should have a minimum separation distance from sensitive receptors as outlined in the following table: Sensitive Receptor Type

12 Biodiversity planting should only be established where reasonably required, without compromising the land for farming and horticultural use.

Form and Character

13 Development should not be undertaken unless it is consistent with the desired character for the zone.

14 Development should not occur within 500 metres of a National Park, Conservation Park, Wilderness Protection Area or significant stands of native vegetation if it will increase the potential for, or result in, the spread of pest plants.

15 Dwellings or other buildings which could reasonably be used for habitation should not be located within 500 metres of the Industry Zone.

16 The type and volume of traffic likely to be generated by a development or land use should not:

- (a) unreasonably interfere with the flow of traffic on the external road network, both adjoining the site of the development and more widely
- (b) result in the need for upgrading, or additional maintenance of, the road network
- (c) result in uneconomic costs to the community for the provision of road services.

Tourism Development

17 Tourism developments should not exceed a building height of 6.5 metres above natural ground level.

18 Tourism development:

- (a) should not be located on land that has a high capability for farming or horticulture, or compromise established rural activities
- (b) may comprise a range of tourist accommodation, recreational and leisure activities at various scales that complement the existing tourism offerings in the locality.

Home Based Industries

19 Home based industry development should not be undertaken unless:

- (a) the building used for the industry is located:
 - (i) on the same allotment as a dwelling occupied by a person who carries on the industry
 - (ii) as far as practicable from dwellings on adjoining land
- (b) the site is located greater than 50 metres from a watercourse.

Land Division

20 Land division, including boundary realignments, should only occur where the allotments created have a minimum area of 100 hectares.

21 Land divisions, including boundary realignments, which proposes the creation of allotments of an area less than 100 hectares, should only be undertaken where:

- (a) it can be demonstrated that a significant and genuine commitment to the land uses on the allotments to be created has occurred or will occur
- (b) the land uses proposed for each allotment will result in genuine value added economic opportunities directly associated with primary production
- (c) it supports outcomes which reinforce economic productivity and environmental improvement with regard to primary production
- (d) a sustainable water supply of sufficient quantity and quality is available to supply the land uses
- (e) the proposed allotment areas are capable of supporting the land uses with reasonable investment and management inputs
- (f) the land uses will be compatible with adjacent land uses
- (g) the arrangement of the allotments has taken into account an assessment of the land with respect to land capability, soil types, erosion control, rockiness, topography, watercourses, runoff, wind conditions, vegetation and rural land use classification
- (h) the arrangement of the allotments and land uses will not result in adverse environmental impacts, including to water resources and vegetation.

Non-complying Development

Development (including building work, a change in the use of land, or division of an allotment) for the following is non-complying:

Dwelling (except in relation to primary production use).

Land division. Except where either of the following apply:

- (a) each allotment is at least 100 hectares in area and has a frontage to a public road of greater than 200 metres
- (b) the allotment will contain an existing building or buildings (or a building or buildings that are substantially complete) involved in the processing, packaging and/ or transportation of farming, horticultural or aquaculture products.

Appendix 2 – Requirements of the Native Vegetation Regulations

Under Regulation 5(1)(c) of the Native Vegetation Regulations 2003 (Development subject to Section 48 of the Development Act, 1993), native vegetation may be cleared where the proponent has demonstrated that it has met the specifics of each section of Regulation 5(1)(c) as set out below. Where this is the case, approval (statutory) is not required for the permitted clearance of native vegetation. Suitable SEB offset provisions for the clearance need to be to the satisfaction of the NVC and in the case where the SEB is proposed to be undertaken on-ground, an associated management plan requires NVC approval.

Under Regulation 5(1)(c) of the Native Vegetation Regulations, native vegetation may, subject to any other Act or law to the contrary, be cleared if-

- (i) the clearance is incidental to a proposed development to which section 46 of the Development Act 1993 (the Major Developments Process) applies; and*
- (ii) an environmental impact statement, public environmental report or development report; and an Assessment Report, relating to the development have been prepared under that Act; and*
- (iii) the Minister responsible for the administration of the Development Act 1993 referred the environmental impact statement, public environmental report or development report to the Native Vegetation Council for comment and report and –
 - (a) the Council provided comments which were included (wholly or substantially) in the relevant Assessment Report; or*
 - (b) the Council failed to provide comments within 8 weeks after receiving the Minister’s invitation for comment and report; and**
- (iv) the Governor has granted his or her consent to the proposed development under section 48 of the Development Act 1993; and*
- (v) the clearance is undertaken in accordance with that consent; and*
- (vi) the clearance is undertaken in accordance with a management plan that has been approved by the Council that results in a significant environmental benefit on the property where the development is being undertaken, or the owner of the land (or a person acting on his or her behalf) has, on application to the Council to proceed with clearing the vegetation in accordance with this provision, made a payment into the Fund of an amount considered by the Council to be sufficient to achieve a significant environmental benefit in the manner contemplated by section 21(6) of the Act.*