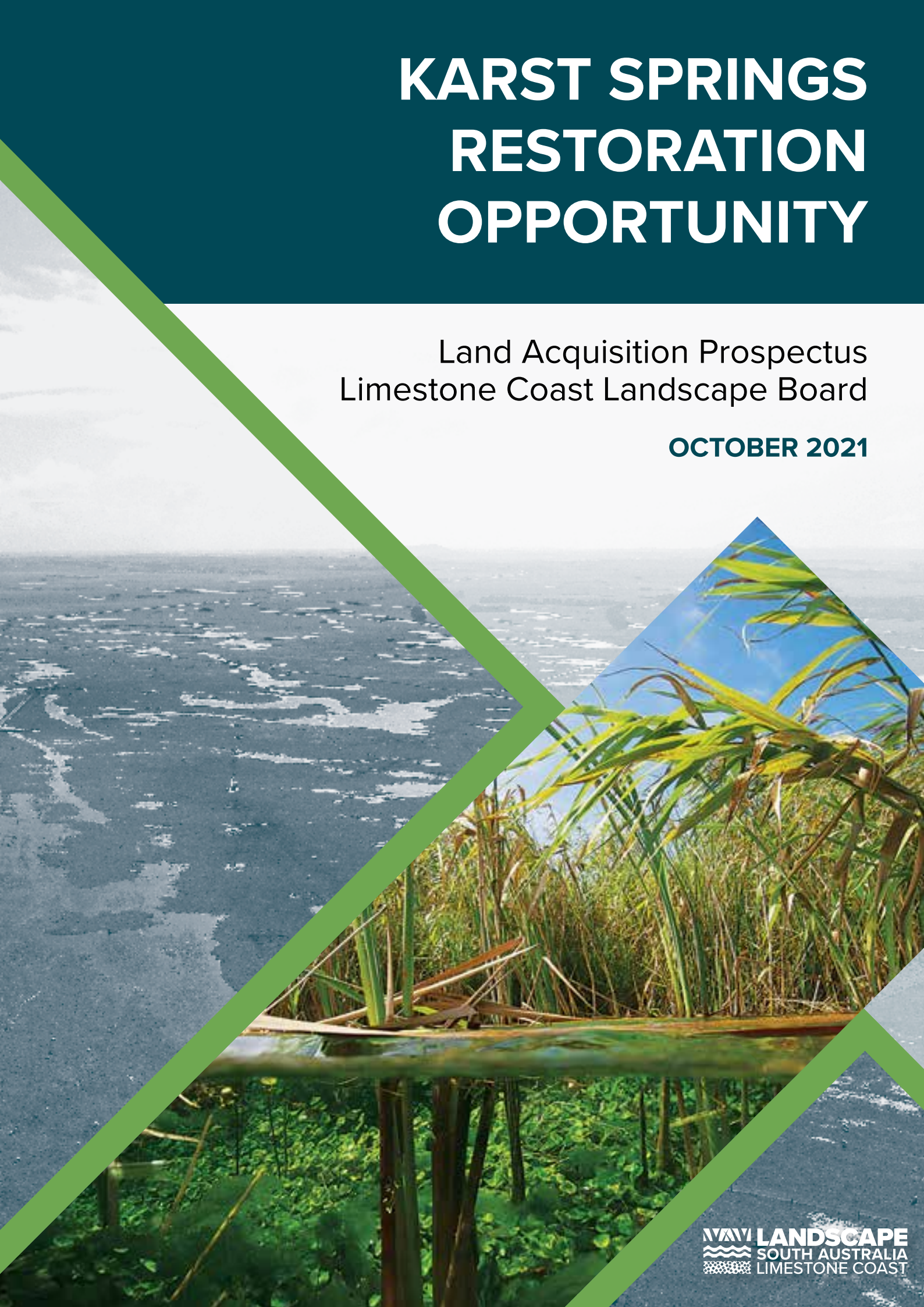


KARST SPRINGS RESTORATION OPPORTUNITY

Land Acquisition Prospectus
Limestone Coast Landscape Board

OCTOBER 2021





“ A BOLD

AND UNIQUE PARTNERSHIP OPPORTUNITY
TO REALISE GENUINE ECONOMIC AND
ENVIRONMENTAL OUTCOMES ”

PENNY SCHULZ
Chair
Limestone Coast Landscape Board





TO MOUNT GAMBIER

VICTORIA

TO PORT MACDONNELL

PROPERTY TO GO TO AUCTION ON 1 DECEMBER IF NOT SOLD PRIOR

180ha (446 acres)
TOTAL SIZE

60 ha

SEASONALLY INUNDATED (DEGRADED) ALKALINE PEAT FEN SWAMPS

6 TITLES
3 UNIQUE KARST SPRINGS

\$5m
SEEKING INVESTMENT OF \$5M FOR LAND ACQUISITION AND RESTORATION

143ha WETLAND RESTORATION POTENTIAL
2 RESIDENTIAL INFRASTRUCTURE IS ON TWO OF THE BLOCKS WHICH CAN BE RESOLD

Just add water

The Limestone Coast Landscape Board are seeking \$5 m in investment to secure this bold land acquisition opportunity to rejuvenate one of our region's critical environmental assets.

The investment will drive genuine economic outcomes, creating security for our primary producers.

The project delivers the generational opportunity provided by the vision of the Landscape South Australia Act 2019.

This rare parcel of land encompasses three Karst springs and associated alkaline peat fens.

These wetland ecosystems are listed

as threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC). These ecological communities are in the top ten most threatened ecosystems in the world.

The topography of the property, the secure water supply from the springs and the containment offered by bordering drains presents a unique opportunity for large scale restoration without impacting neighbouring properties.

Located in a high risk management area for groundwater resources this restoration will sequester carbon, create landscape resilience in a changing climate and deliver water security.

With land acquisition, minor infrastructure works and water, the protection of this land will deliver exponential benefits.

Land acquisition benefits

- Carbon sequestration
- Agricultural resilience to the impacts of climate change
- Nature-based tourism opportunities
- Restoration, management and protection of a threatened ecological community
- Community connection with landscapes

Opportunity at a glance

A unique land acquisition to repurpose degraded farmland for state economic and environmental benefit

The primary production property is located in the Eight Mile Creek Swamp system, approximately 1.5 km from Ewens Ponds Conservation Park, and 29 km from Mount Gambier. The property contains Karst springs and is bounded by Badenoch Main Drain to the north east and No.2 Milsteads Drain to the south west.

The property proposed for restoration is part of a once extensive alkaline peat fen situated on the coastal plain close to the town of Port MacDonnell. It has three of the ten rare Karst springs in the Eight Mile Creek swamp system, a series of nationally significant ponds.

There are approximately 60 ha of seasonally inundated alkaline peat fens currently on the property. Restoration of the

site could achieve up to 143 ha of Karst springs and associated alkaline fens, equating to 39% of the original Eight Mile Creek Swamp System extent. The restoration also includes up to 40 ha for terrestrial revegetation.

Resulting from its use in primary production, the property is heavily degraded including peat subsidence dropping the property elevation close to sea level. Should the property be purchased privately for continued primary production use further deterioration and loss of environmental values will occur.

Large portions of the property are seasonally inundated, further drainage to continue primary production is not a viable option due to low elevations and storm surge.

The simplicity of this site is minor construction works to adjoining drains will inundate and restore the area with water from the three Karst springs. After the initial acquisition, ongoing management costs are low due to the ability of wetland vegetation to colonise rapidly and restore habitat.

Protection of neighbouring properties can be provided by constructing bunds on the property adjacent the Badenoch Main Drain and No.2 Milstead Main Drain, using the drains as hydrological cut-offs to surface and groundwater. The application of this technique has proven successful at Pick Swamp, showcased at the end of this prospectus.



Limestone Coast at a glance

Why now

Immediate action is required to secure the many benefits offered by restoring this land



The Limestone Coast is an area of over 28,000 square kilometres containing a very diverse range of industry sectors. The economy is built from traditional agriculture based activities, but has now expanded to include forestry, manufacturing, tourism, engineering, transport, retail, health, education and service industries.

The region capitalises on its enviable groundwater resources and has significant opportunities for expansion in agriculture, forestry and fishing, particularly in red meat and dairy production.

As exporters the Limestone Coast region is renowned internationally for supplying dairy, world class wines, nutritious beef and lamb grown on lush green pastures, fresh clean seafood from the pristine oceans waters bordering the regions coast and the prominence of its plantation forestry areas.

Property will be auctioned in 2021

Landowner is supportive of the proposed restoration outcome and has exclusively offered the property to Government for sale prior to public auction on 1 December.

Property ending its viable life for use in primary production

Peat subsidence due to drainage of the land has dropped the elevation close to sea level creating significant risk of saltwater inundation and prolonged flooding periods.

By returning this site to a wetland there are significant opportunities

Carbon sequestration

Peat soils have some of the greatest carbon sequestration capacity of any soil.

Nature-based tourism opportunities

Located on the Southern Ocean Drive, the South Australian continuation of the very popular Great Ocean Drive, restoration of the site will provide new nature tourism opportunities to enhance the Limestone Coast economy.

Agricultural resilience to the impacts of climate change

The property is located in a high risk groundwater management area that has some of South Australia largest dairy properties. Action is needed to mitigate these risks to wetlands and restoring this site could prevent water allocation restrictions to these primary producers.

Community connection with landscapes

A significant opportunity to further connect the community with the unique Limestone Coast landscape. Building community engagement, education and awareness along with effective and culturally sensitive land management practices.

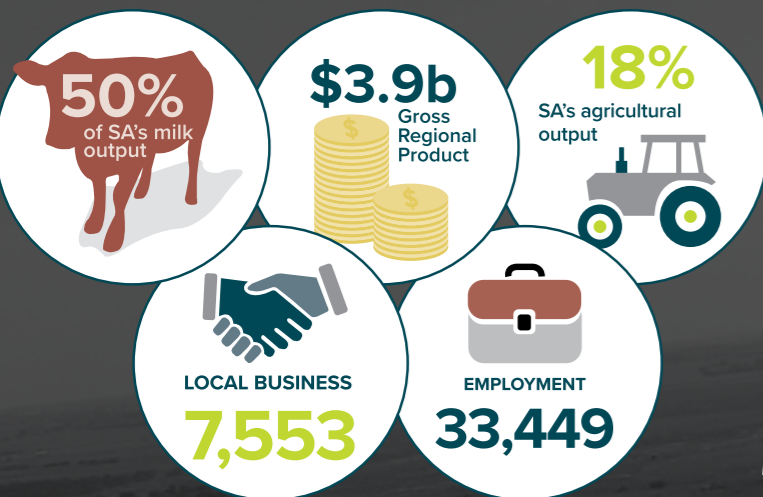
Restoration, management and protection of a threatened ecological community

A once in a generation opportunity to restore, manage and protect the ecological community in line with EPBC obligations and restore a site of national and international environmental significance supporting many rare and threatened species.



Building a resilient Limestone Coast landscape

This opportunity embodies effective natural resource management, recognising that our ability to produce food and fibre from the land will only be viable, profitable and socially acceptable if the natural environment is also nurtured.



Significant nature-based tourism opportunities

The site lends itself to tourism development being located near the township of Port MacDonnell on the popular Southern Ocean Drive. It is a blank canvas for well-planned infrastructure to support community and nature-based tourism experiences.

There is a demonstrated demand for wetland experiences, including boardwalks, bird watching opportunities, snorkelling and kayaking in the Limestone Coast. Nearby Conservation Parks, Ewens Ponds and Piccaninnie Ponds, provide significant tourism opportunities in the area, with over 7,000 snorkel permits issued in 2020-21.

The land acquisition opportunity has the potential to leverage investment.



This could drive the visitor economy further and faster in the Limestone Coast by delivering sustainable nature-based tourism experiences that nurture and broaden environmental and cultural understanding.

Limestone Coast parks contributed \$37 m to the local economy, 10% of the statewide value. Across South Australia national parks also contribute significantly to jobs in the private sector in regional communities.

Parks are low cost to run and therefore have high cost benefit ratios providing great value for investment. Since the Covid-19 pandemic, parks regional visitation revenue has increased by 60%, providing a significant opportunity to establish the Limestone Coast natural wonders as a destination of choice.

Carbon sequestration opportunities

Peat soils are one of the most significant sinks of carbon on earth, and peaty wetlands are one of the greatest natural assets of the Limestone Coast. They are also storehouses of enormous amounts of carbon.

At the proposed site, peat soils make up approximately 83% of the total land acquisition parcel.

It is estimated that the thickness of the peat soils carbon potential has diminished at least 0.5 m due to artificial drainage, a lowered watertable and long-term agricultural use.

Wetland restoration through holding water in this area provides an enormous opportunity to sequester atmospheric carbon via a re-establishment of the peat accumulation process.

Wetland restoration also contributes significantly to a reduction in greenhouse gas emissions. Wetlands contain a disproportionate amount of the earth's

It is estimated over a period of 25 years, 36,500 tonnes of soil carbon could be sequestered as a result of this proposed wetland restoration. At \$15.99 per tonne, this amount of CO₂ abatement is presently worth over \$2 m.

total soil carbon – holding up to 30% of the estimated 1,500 billion tonnes of global soil carbon, despite only occupying 5–8% of its land surface.

Other soils types on the proposed site provide opportunities for further carbon sequestration as they are ideal for revegetation. These include riparian areas which could be revegetated with densely-planted silky tea-tree, and slightly higher elevation non-peaty areas which could be revegetated with a swamp gum woodland community.

Agricultural resilience to the impacts of climate change

Agriculture underpins the Limestone Coast economy with a total value of \$1.1 b in agricultural output. Protecting this output and building resilience in agriculture in a changing climate is a key priority of the Limestone Coast Landscape Board. The proposed land acquisition is an opportunity to contribute to achieving this. A crucial element of building agriculture resilience in a changing climate is water security and sustainability.

Primary production in the region is heavily reliant on groundwater resources and levels have been declining where demand for water exceeds recharge. This puts wetland, such as the Karst springs, at risk.

Where wetlands are threatened by declining groundwater levels, primary producers are impacted by reductions to water allocations. These reductions can result in reduced productivity and economic output.

Finding a balance in a changing climate is key to supporting our primary industries and sustaining our ecosystems.

It is crucial that the region acts now and this project can:

- Secure water for primary producers through localised groundwater recharge
- Prevent saltwater intrusion into the groundwater
- Remove water security risks to wetlands preventing the need for reductions to water allocations, a potential \$3.2 m in lost property values to surrounding land.



Building a resilient Limestone Coast landscape

Restoration, management and protection of a threatened ecological community

The Limestone Coast is one of South Australia's two biodiversity hotspots. Prior to European settlement, the Limestone Coast had extensive seasonal and permanent wetlands but drainage to facilitate year-round agriculture resulted in 97% of wetland habitat being lost, with very few permanent water sources remaining in the landscape.

Many remaining wetlands are being heavily degraded as they are not located in conservation areas and are found on private farmland, like the proposed site for this restoration.

The Eight Mile Creek system tertiary Karst springs are unique to the Australian continent and these springs can only be found in two other locations globally.

The three Karst springs and associated alkaline fens on the proposed site were listed as part of a threatened ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) in 2020.

The purchase of the property and subsequent wetland restoration activities would assist SA in managing and

protecting the ecological community in line with EPBC obligations, resulting in significant national prestige.

Restoration will provide crucial refuge for waterfowl and aquatic species such as frogs and fish particularly in the face of a drying climate. It would also result in the establishment of a considerable area of Silky Tea-tree wet shrubland, a habitat made rare by wetland drainage.

Retaining and elevating water levels would aid recovery actions for several threatened species including the EPBC listed vulnerable Ewens Pygmy Perch, one of only two populations in SA where the species are known to occur.

Wetland restoration can also play an important role in our approach to climate change adaptation, through capturing and storing carbon to reduce atmospheric greenhouse gases, and providing resilience to hazards such as flooding, storm surge and coastal inundation.

Opportunity for protection of threatened species

- Glenelg Spiny Crayfish (EPBC Endangered)
- Ewens Pygmy Perch (EPBC Vulnerable)
- Southern Pygmy Perch (EPBC Vulnerable)
- Australasian Bittern (EPBC Endangered)
- Swamp Antechinus (EPBC Vulnerable)
- Magpie Goose (Endangered SA)
- Orange-bellied Parrot (EPBC Critically Endangered)
- Dwarf Galaxias (EPBC Vulnerable)
- Southern Bell Frog (EPBC Vulnerable)
- Swamp Greenhood (EPBC Vulnerable)
- Maroon Leek-orchid (EPBC Endangered)
- Yarra Pygmy Perch (EPBC Vulnerable)
- Brolga (Vulnerable SA)

Key environmental benefits

- Restore habitat for nationally endangered species
- Restoration of an underrepresented wetland type
- Creation of a permanent spring-fed wetland
- Addition of three Karst springs to the national reserve system
- Increased ecological connectivity in a fragmented landscape



A proven concept...

PICK SWAMP

In 2005, a collaborative effort between the Department of Environment, Water and Natural Resources and the former South East Natural Resource Management Board purchased 230 ha of previously drained wetland, Pick Swamp, from a local farmer.

Pick Swamp was largely contiguous with the Piccaninnie Ponds Conservation Park until the 1970's, when it was drained and cleared to support cattle grazing.

Prior to restoration the site supported water-logged introduced pasture with a near absence of a wetland ecosystem, and was at risk of further drainage.

The opportunity was taken to return the property to conservation, by utilising the discharge of water from a Karst spring and altering drainage works to restore the property to a wetland ecosystem.

RISK MITIGATION

Pick Swamp is directly adjacent to properties used for agricultural purposes.

Whilst often being seasonally inundated, restoring Pick Swamp posed a risk of inundating the adjacent properties further.

Protection of neighbouring properties from further inundation was successfully achieved by constructing a bund on the property adjacent to an existing drain, using the drain as a hydrological cut-off to surface and groundwater.

Groundwater monitoring was established on the adjoining pasture and the results have shown the bund and drain works have managed the risk of waterlogging and inundation adjacent to the site.

Similar techniques could be applied to the proposed restoration.

FROM DEGRADED FARMLAND TO RAMSAR SITE

Despite the historic clearance and habitat alteration, the ecosystem response was rapid and remarkable with an immediate recovery of wetland habitat.

The site now represents an outstanding example of Karst spring and alkaline peat fen wetlands.

Piccaninnie Ponds and Pick Swamp is now identified as a wetland of international importance under the Ramsar Convention.

The Pick Swamp restoration has significantly boosted populations of endangered, vulnerable and threatened species including the Australasian Bittern, Magpie Goose, Swamp Antechinus and Brolga.

Pick Swamp demonstrates how rejuvenating and protecting the regions wetlands, enhances primary production, biodiversity, industry, social and cultural values.

It confirms the power of partnering to deliver genuine economic and environmental outcomes.



An aerial photograph of a coastal landscape, showing a wide expanse of water and a long, straight pier or breakwater extending into the sea. The sky is overcast with grey clouds. A thick, bright green diagonal stripe runs from the top left towards the bottom right, partially obscuring the landscape. In the bottom left corner, there is white text providing contact information.

Contact

Steve Bourne
General Manager

Limestone Coast Landscape Board
Mobile: 0427 663 857