

15.10 DRY CREEK SALT FIELDS FUTURE**Record Number:** D26/33937**Author:** Manager Growth & Investment**Authoriser:** Director Development & Community**Attachments:**
1. [Shifting Salts Summary](#) 
2. [Adelaide Plains Shifting Salts Background](#) **RECOMMENDATION**

“that Council, having considered Item 15.10 – *Dry Creek Salt Fields Future*, dated 19 August 2026, notes the report.”

Purpose

To inform Council Members about Adelaide University research considering future opportunities for the Dry Creek Salt Fields.

BackgroundShifting Salts

The Shifting Salts – Future Opportunities for the Dry Creek Salt Fields Project is a collaborative research project led by Adelaide University and funded by Green Adelaide. The project has developed a series of land use options (including transition pathways) that balance sustainability and restoration, recognising the industrial legacy of the site and its growing ecological and strategic importance to metropolitan Adelaide.

A publicly available interactive online story map provides detail.⁶ A document (**Attachment 1**) summarises the project, with the key message being:

The overarching aim of the Shifting Salts – Future Opportunities for the Dry Creek Salt Fields Project is to provide government with a clear, evidence-based roadmap for transitioning the Dry Creek Salt Fields into a landscape that supports ecological resilience and sustainable regional development, while managing environmental risk and maintaining flexibility over time. With growth in the

⁶ [Shifting Salts: Reimagining The Dry Creek Salt Fields](#)

northern region already underway, sequencing restoration and land-use planning together is important if the full benefits of that growth are to be realised

The Dry Creek Salt Fields can simultaneously:

- *Deliver major restoration and blue-carbon outcomes*
- *Support the restoration of coastal landscapes within Kaurua Yerta, creating opportunities for cultural knowledge and stewardship to inform long-term land and water management*
- *Provide green infrastructure to buffer sea-level rise and storm surge*
- *Support the liveability and sustainability of future residential development in northern Adelaide*
- *Reduce risks to mangrove and saltmarsh habitats from hyper salinity*
- *Improve water quality entering Gulf St Vincent*
- *Enhance fisheries close to metropolitan Adelaide*
- *Create additional refuges for migratory shorebirds*
- *Optimise stormwater and wastewater management to support development of the employment lands and industrial precincts*
- *Provide public open space and nature-based amenity for a rapidly growing population.'*

Within Adelaide Plains

Within Adelaide Plains, the salt fields investigated extend from south of the Middle Beach settlement to the council boundary. The salt fields are Crown Land or within private ownership, and within a Conservation Zone of the Planning and Design Code.

Attachment 2 shows Adelaide Plains specific land areas:

- the Planning and Design Code Zones overlain with salt fields land ownership,
- ownership next to Scenarios 3 – 5 being Middle Beach pumping continuing, with dry ponds to the east.
- ownership next to Scenario 2a. Scenarios 1 and 2a&b involve salt production of some form.

The research shows various scenarios

- How historically salt mining used to operate
- 1 Business as Usual
- 2a Salt Mine Resumption
- 2b Salt mining Resumption Plan revisited with Ecological Co-Benefits
- 3 Full Tidal Restoration
- 4 Stormwater Retention Basins
- 5 Mixed Use Development and Tidal Restoration.

Council officers have been aware of the research for some time, and it is referenced in the Middle Beach Settlement Paper endorsed for consultation at the July Ordinary Council meeting.

The online story map has recently become available. Council officers from Salisbury, Playford and Adelaide Plains have been briefed and are beginning to consider the scenarios. As sponsored by Green Adelaide, it is understood various briefings within State Government are occurring. Adelaide University conducted a community workshop at St Kilda on 30 July.

Discussion

Given the interrelationship of the salt fields in Adelaide Plains as part of the salt fields to the south and coastal area, officers intend to monitor how the research is being received by the State Government, Salisbury and Playford Councils.

This is particularly the case given planned northern growth, SA Water's direct interests at Bolivar, and the important coastal protection role of the salt fields area.

Conclusion

Officers will keep Council Members updated.

ReferencesLegislation

Local Government Act 1999

Planning, Development and Infrastructure Act 2016

Council Policies/Plans

Strategic Plan 2025 – 2028

Middle Beach Settlement Plan (draft endorsed for consultation)

Future Opportunities for the Dry Creek Salt Fields Project



The Dry Creek Salt Fields extend approximately 5000 hectares and 28 kilometres of coastline, from Dry Creek in the south to Middle Beach in the north (**see map on page 2**). The site supported salt production for more than 70 years, supplying crude brine to Penrice Soda Ash Plant. Salt production ceased in 2013 due to closure of Penrice and there was no market for the product produced at Dry Creek Salt Fields. The salt fields have been managed in a holding pattern since 2013.

The holding pattern was intended to be temporary (<5 years) to stabilise water levels and salinity in order to support migratory and shorebird habitat and reduce environmental risk, while longer-term decisions about the site's future are explored. No permanent land-transition plan has been implemented.

While the current land and leaseholder, Buckland Dry Creek Pty Ltd, has received provisional approval to resume salt mining in 2025, significant engineering, market, and operational challenges remain. Buckland Dry Creek Pty Ltd is still required to provide detailed site operating procedures before full approval will be given to restart salt mining. As of mid 2026, no procedures have been provided to Government.

The Shifting Salts – Future Opportunities for the Dry Creek Salt Fields Project is a collaborative research project led by Adelaide University and funded by Green Adelaide. The project has developed a series of land use options (including transition pathways) that balance sustainability and restoration, recognising the industrial legacy of the site and its growing ecological and strategic importance to metropolitan Adelaide. The main focus has been Sections 2, 3 and 4 of the salt fields, which together make up the majority of the coastal system north of Dry Creek. The section currently being examined for future housing is Section 1. Section 1 is south of Dry Creek and represents only 1/5th of the total site (**see map on page 2**). The Dry Creek Salt Fields include a mix of government-owned and privately-owned land and remain subject to mining tenure under South Australia's Mining Act framework. As a result, any future pathway must operate within existing legal and rehabilitation obligations. Importantly, restoration is an obligation under the mining act and various future land use scenarios outlined in the Project assist towards these aims.

A central driver is the recognition that the current holding pattern was never intended to be a permanent solution. The long-term habitat viability is increasingly constrained by rising/fluctuating salinities (decreasing habitat values for birds) and growing pressure on pond floors and bund structures. The salt fields sit adjacent to nationally and internationally significant environments, including the Adelaide International Bird Sanctuary and Adelaide Dolphin Sanctuary, meaning that poorly managed operations or mishandled sequenced change in the salt field carries real environmental risk. An example of such risk was seen in the 2020 hypersaline brine contamination of mangrove and saltmarsh at St Kilda.

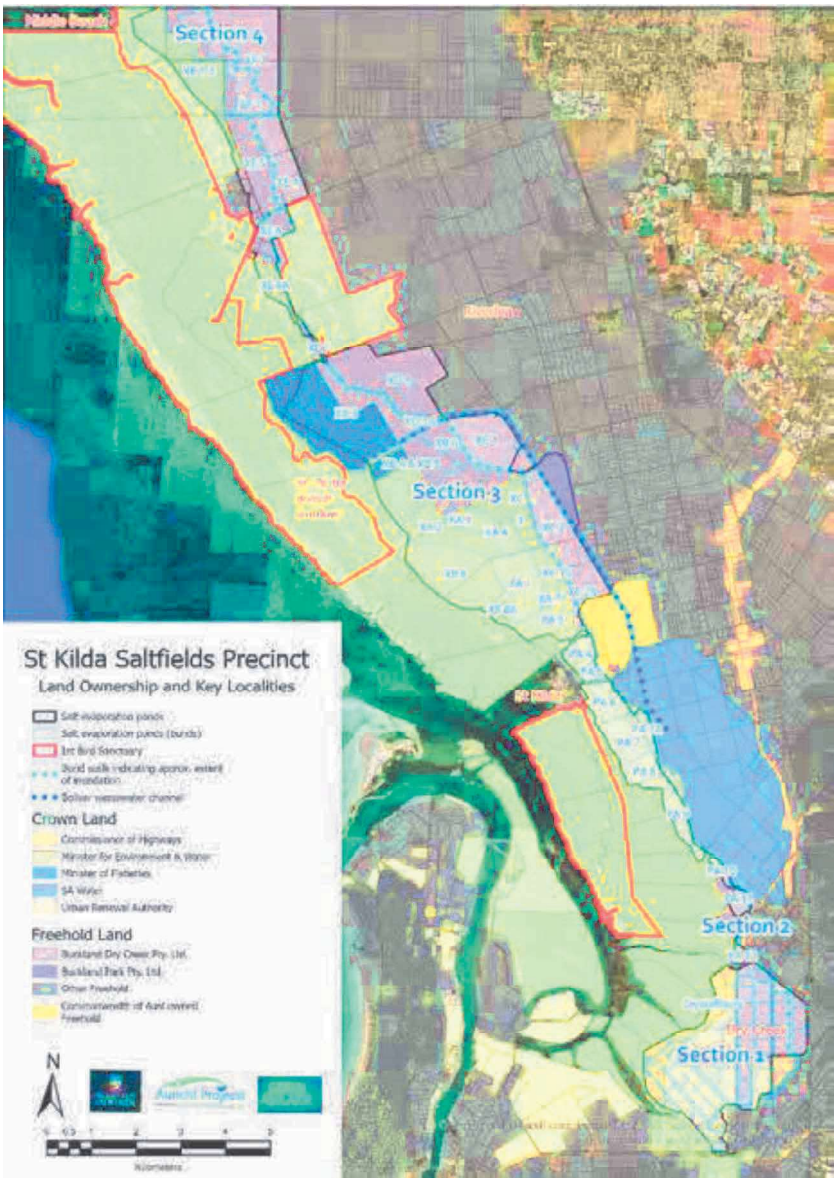
The Dry Creek Salt Fields are part of a zone of considerable economic and strategic land-use pressure, with significant industrial expansion, development and residential growth. Immediately inland lie a National Employment (Economic) Cluster and Prime and State Significant Industrial Employment Precincts. The coastal fringe carries existing tourism zoning under the Planning and Design Code, and the broader region is a designated growth corridor under GARP, with population



Future Opportunities for the Dry Creek Salt Fields Project



growth, new housing and infrastructure expanding rapidly through Angle Vale, Virginia, Two Wells and Gawler. The site also falls within zones of coastal inundation under 1% AEP storm surge scenarios projected out to 2050 and 2100, and within a mapped high flood-risk zone, where flooding poses an unacceptable hazard to sensitive or vulnerable uses. As this growth corridor is already expanding, decisions about the salt fields' future need to be made alongside this growth. Sequencing restoration and land-use planning together is important if the full benefits of growth in the northern regions are to be realised.



Above: map showing each section of the ponds pond names and land ownership. Crown land is in green and privately held land is in pink.

Future Opportunities for the Dry Creek Salt Fields Project



While future use of the site needs to negotiate these competing pressures, the positioning is also an opportunity, as the salt fields are well placed to serve a broader strategic purpose. The site sits within one of the region's few remaining areas of intact coastal habitat, offering a potential, if restored, to be a natural sea level rise buffer to surrounding land uses, and an opportunity to protect and restore ecological values as the north of Adelaide continues to grow around it.

The land use options (scenarios) in this Project are assessed against 'business as usual', which is defined as maintaining the holding pattern. Four further scenarios are presented, including assessing the feasibility of salt production, prioritising coastal and blue-carbon restoration through tidal reconnection, repurposing parts of the system for stormwater and flood mitigation, and enabling mixed-use development in suitable landward locations.

One of the major opportunities explored in the project is a full tidal restoration scenario, where large parts of the salt-pond system are progressively reconnected to natural tidal flows ('tidal restoration'). This approach would transform many of the ponds back into mangroves, saltmarsh and intertidal habitat. At the scale of the Dry Creek Salt Fields, this represents one of the largest potential blue-carbon restoration opportunities in southern Australia and would create a continuous coastal wetland system extending along much of the northern Adelaide coastline. As the surrounding region absorbs a significant share of Adelaide's population growth, a restored salt fields site could also serve as accessible open space and coastal amenity for new and existing communities, with significant tourism value. Tidal restoration trials such as that completed at pond XB8A illustrated how such restoration would proceed. The tidal restoration trial was transformed into a functioning coastal ecosystem within 3 years (see photo page 2).



Left Photo: Foreground shows the pilot tidal restoration project (photo taken 2024) in former salt Pond XB8A, which was drained in 2017 to allow tidal reinstatement. The trial demonstrates the feasibility of tidal restoration. XB8 and XB 4-5 to the north of the trial site are most suitable for immediate transition to tidal restoration.

Right photo: current salt ponds, with pond XB8A in middle, showing the area that could be restored from salt ponds to coastal vegetation

Salt production remains a relevant consideration, given the active mining lease. However, the site has changed substantially since historical operations, with large areas of crystalliser ponds in Section 1 having been infilled, Section 2 no longer able to perform its former function due to cracking of pond beds, and hypersaline conditions intensifying across several ponds in Section 3, with consequences for internationally significant migratory and shorebird habitat. Infrastructure and bunds are also degraded across the site after 13 years without active salt

Future Opportunities for the Dry Creek Salt Fields Project



production. Future salt mining operations will require a bypass pipeline to avoid parts of Section 2, and production would need to operate at a smaller scale than in the past. In examining the salt mining scenario, this project departs from the current plan outlined by the leaseholder Buckland Dry Creek Pty Ltd in the Program for Environment Protection and Rehabilitation (PEPR). Instead, an alternative path to salt mining is provided, which allows rehabilitation via tidal restoration, to occur alongside salt mining. Two large condenser ponds are removed from the evaporation chain, XB8 and/or XB4–5 (~340 ha), and then opened to tidal flow. This would balance the salt-making system (which is unbalanced in the current plan, making salt mining impossible) and also, importantly, mark a clear step toward rehabilitation of this landscape.

The project also examines further scenarios in which some ponds could be used strategically as stormwater retention basins for the surrounding growth corridors, or landward ponds could be potentially repurposed for development. Given the site's coastal proximity and exposure to storm surge and sea-level rise, the project's primary focus is on how restored tidal systems could improve coastal resilience, provide buffers against sea-level rise and storm surge, deliver amenity and tourism value, assist with flood management, and contribute to blue-carbon sequestration. These attributes have been evaluated alongside economic and social outcomes through a benefit–cost analysis.

The benefit-cost analysis finds that the current holding pattern is not a neutral or cost-free baseline. Modelled over 2027–2057, business-as-usual carries a net present value of approximately –\$71.2M, mainly due to the increasing risk the site poses to the environment from bund failure and aging infrastructure. Staged tidal restoration, by comparison, requires an estimated \$112.5M in upfront capital and transition costs but is expected to generate around \$203.0M in quantified benefits, producing a net present value of \$90.5M, a benefit-cost ratio of 1.80 and an ROI of roughly 80%, improving the site's overall economic position by approximately \$161.7M relative to continuing the holding pattern.

The strongest quantified benefits are coastal flood mitigation, stormwater detention and recreational fishing, with blue-carbon storage and sequestration contributing a smaller share. These quantified benefits are conservative, accounting only for those supported by peer-reviewed evidence, meaning a number of other significant benefits are not yet included. This means the true value of restoration is likely much higher than the model shows. This demonstrates that restoration functions as practical infrastructure, as well as delivering broader ecological benefits.

The project has released a public-facing [GIS StoryMap](#), allowing members of the community to explore the Dry Creek Salt Fields spatially, understand the history and changes across the site, consider the current environmental and management risks, and engage with potential future options for the landscape.

A community launch for Shifting Salts: Future Opportunities for the Dry Creek Salt Fields is planned as part of Climate Action Week. Further information is available here: <https://events.humanitix.com/acaw-shifting-salts-future-opportunities-for-the-dry-creek-salt-fields>

A broader government stakeholder meeting is also being planned for late 2026 to present the project findings and discuss future pathways. The project team would welcome council perspectives about the site and surrounding strategic values at this meeting.

Future Opportunities for the Dry Creek Salt Fields Project



Key message:

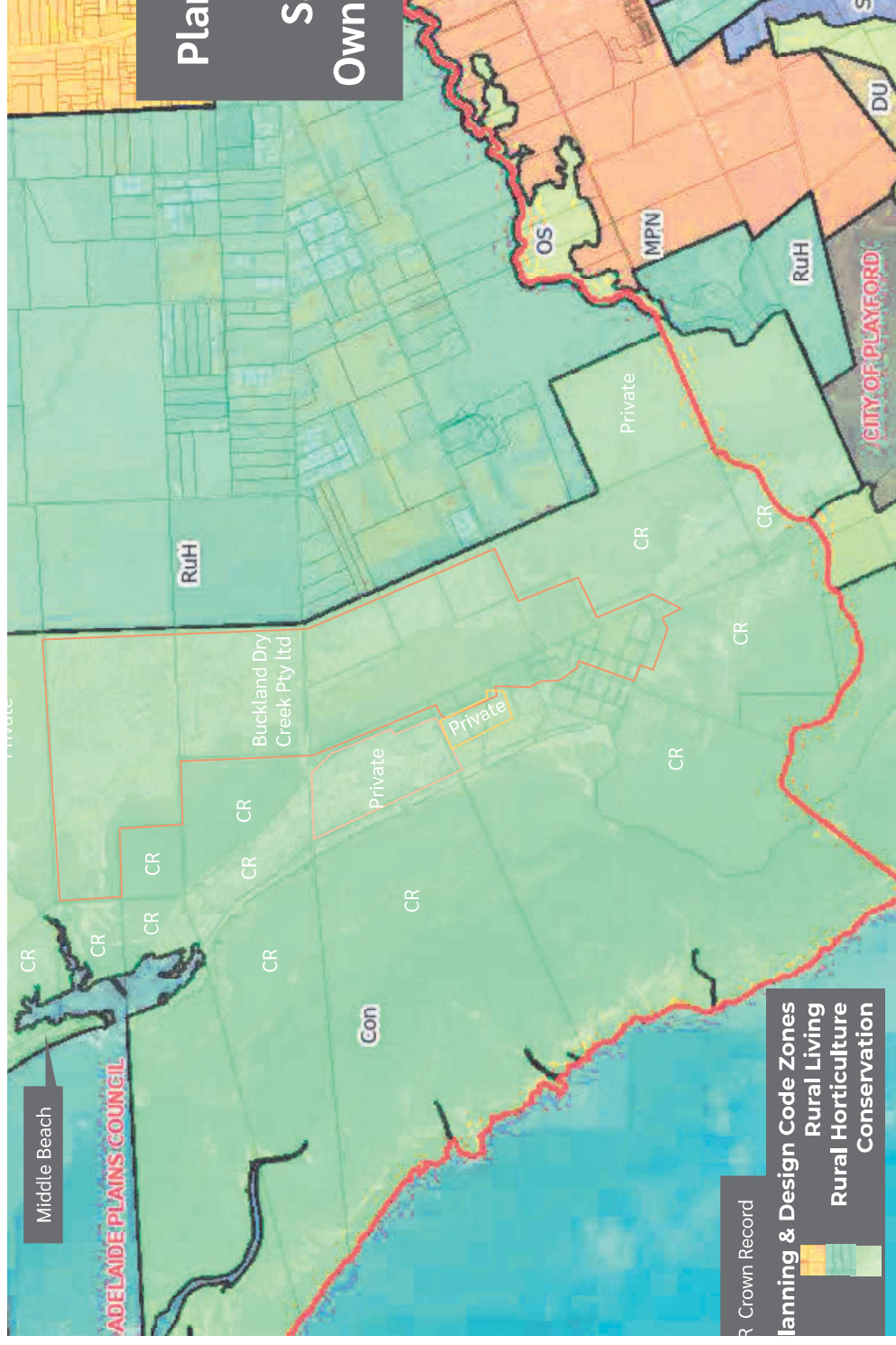
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Planning and Design Code
Salt Fields Land
Ownership and Zoning

