



# Coorong Infrastructure Investigations

## Options analysis and shortlisting- outcome

The Coorong Infrastructure Investigations Project (CIIP) is investigating the feasibility of long-term infrastructure and management options for improving the ecological health of the Coorong.

### What are we trying to achieve?

The Department for Environment and Water is committed to involving the community in determining the outcomes throughout the Healthy Coorong, Healthy Basin Program.

In the first stages of our community consultation we worked with the community and the Coorong Partnership to determine what they deemed to be the essential outcome from any infrastructure works for the South Lagoon. It was determined that the most important, and essential outcome of the CIIP is finding the option/s:

**“that best contribute to improving the ecology of the South Lagoon as determined by scientific evidence, given water availability and constraints.”**

### What was decided?

Through mid-2020, we undertook a consultation process aimed at gathering community input into assessing and ultimately shortlisting a range of potential infrastructure options for further investigation. We are now pleased to confirm that the following options will progress to further feasibility investigations:

- A connection between the Coorong South Lagoon and Southern Ocean
- Coorong Lagoon dredging to improve connectivity
- Lake Albert to Coorong Connector
- Further augmentation of South East Flows to the Coorong
- Additional automated barrage gates.

This is an investigation into feasibility at this stage, not a decision to proceed any of these concepts.

Further community consultation will be required on any options deemed to be feasible before such a decision would be made.

### How were these options chosen?

The process of choosing options for investigation started in March 2020, when Tonkin Engineering were commissioned to undertake an analysis of previously investigated infrastructure options, noting the focus of previous investigations was not always on the ecological health of the Coorong. Tonkin delivered a technical review outlining options along with a summary of:

- Purpose/intended outcomes of the options
- Benefits/impacts of the options (environmental, social and economic)
- Engineering feasibility and approximate cost of each option (where known)
- Previous engagement/consultation feedback (where known)
- Recommendations from previous investigations

- Knowledge gaps that may require addressing for each option

In June 2020, we asked the community to consider what criteria they felt any potential options should be assessed against. This was done through a YourSAy survey and subsequent online community workshops agreed that criteria will:

- best contribute to improving the ecology of the South Lagoon as determined by scientific evidence, given water availability and constraints
- protect sites and areas of all cultural, Indigenous and broader community significance
- reflect the needs of the community
- provide a long-term solution that can be sustainably managed
- grow / support local economic opportunities and education now and into the future
- enable the continuation and enhancement of use of the wetland in a sustainable manner
- be adaptable, flexible and is aesthetically sensitive

The community were also asked to identify any new infrastructure / management options they thought should be considered. Following the Tonkin review and community options identification process, the following list of options was developed for consideration:

- Increased dredged Murray Mouth dimensions
- Training walls for an open Murray Mouth
- Coorong - Lake Albert connector
- Coorong Lagoon dredging to improve connectivity
- Further augmentation of South East Flows to the Coorong (SEFA)
- Coorong South Lagoon regulator
- Temporary pumping from the Coorong South Lagoon to the Southern Ocean (salinity reset)
- Permanent connection between the Coorong South Lagoon and Southern Ocean
- Additional automated barrage gates
- Temporary wetting / drying cycling of the Coorong South Lagoon (community proposed option)
- Water level induced flow from the Southern Ocean into the Coorong (community proposed option)

## How did we evaluate the options?

Once we had developed the above list of options for consideration, we needed to evaluate the merits of each option to support the ecological health of the Coorong, particularly the Coorong South Lagoon. To support this evaluation, multiple techniques were used including engagement with the South Australian community, First Nations perspectives and through analysis tools including a Multi-Criteria Analysis (MCA).

## Community involvement

To allow for wider engagement with the community, we again used the well-established YourSAy system and asked contributors to consider the options, nominate their preferred three options in order of preference and identify which criteria they felt the options best met. We also held a number of webinars where the public could listen to technical explanations of the various options and ask questions. These were followed by further community workshops to better understand the issues around each option.

[Download the results of the survey.](#)

This process provided us with a list of options the community felt should be prioritised along with an indication of the criteria the community most felt the options met.

## The Coorong Partnership

In addition to the community evaluation process, an options evaluation workshop was held with the Coorong Partnership, a ministerially appointed community reference group specifically tasked with providing advice to initiatives under Project Coorong.

Following their analysis of the options, the DEW MCA results (see below) and YourSAy survey results, The Coorong Partnership provided their recommendations on the prioritised options that they collectively thought should progress to feasibility investigations as follows:

- Coorong - Lake Albert Connector
- Permanent connection between the Coorong South Lagoon and Southern Ocean
- Temporary pumping from the Coorong South Lagoon to the Southern Ocean (salinity reset)
- Further augmentation of South East Flows to the Coorong (SEFA)
- Coorong Lagoon dredging to improve connectivity

## Multi-Criteria Analysis

To support the evaluation of the options for shortlisting, a technical MCA was undertaken of each option. Each option was evaluated against the following themes:

- Constructability
- Environmental/ecological health
- First Nations perspectives

For each theme, multiple criteria were developed. The constructability criteria and the environmental/ecological health criteria were developed in a number of working groups that consisted of DEW and external subject matter experts with expertise relevant to each theme (e.g. ecologist, hydrologist and site operators for environmental / ecological health criteria development).

The First Nations perspective MCA was exclusively conducted through engagement with Ngarrindjeri Aboriginal Corporation (NAC) and the First Nations of the South East (FNSE).

The criteria used in the MCA for each theme were posed as a question (e.g. does this option assist to improve system connectivity?). These questions were posed to workshops of subject matter experts who evaluated the options and provided rationale as to why they felt an option met each criterion, or otherwise.

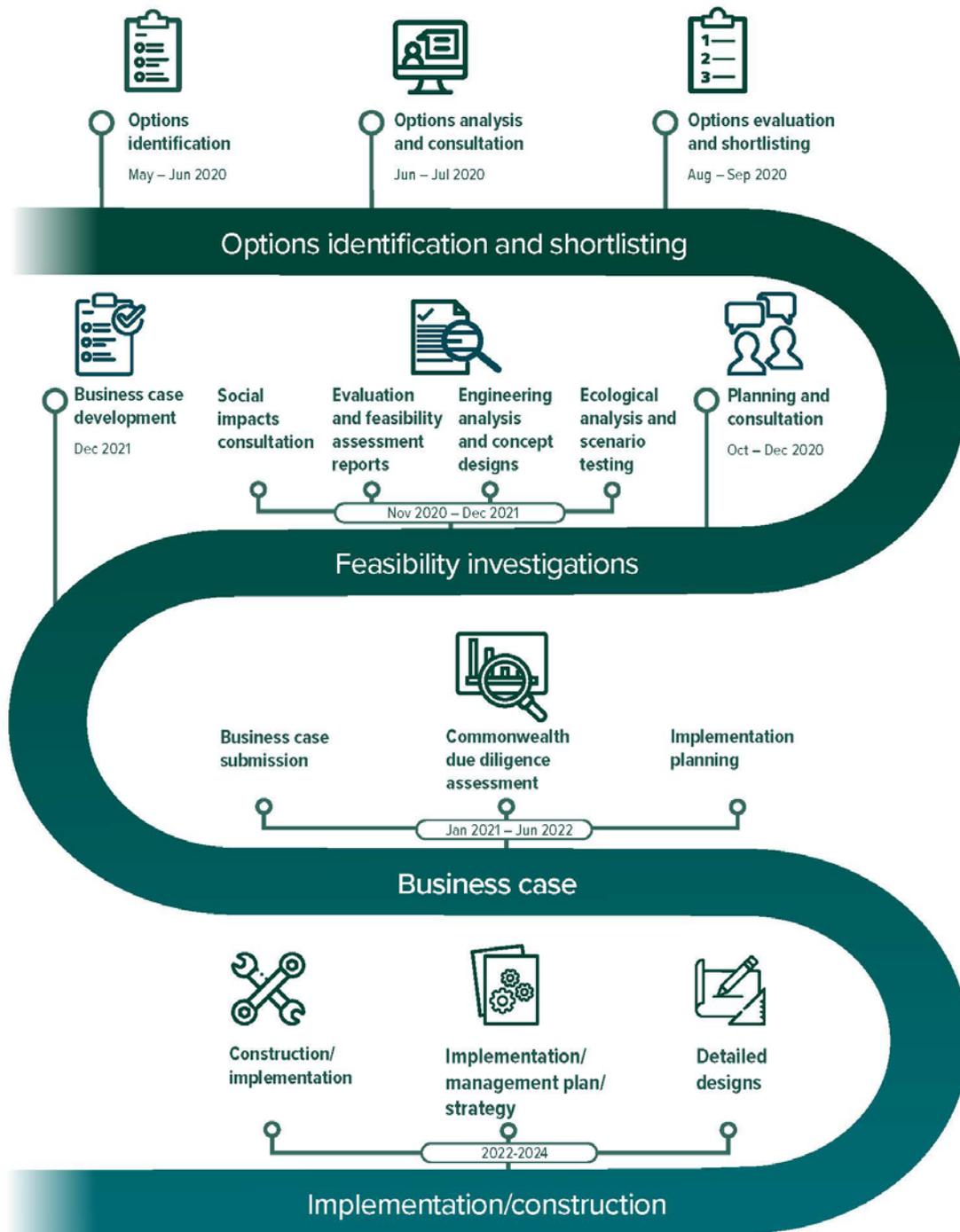
## How did we make the decision which options to progress?

Once all the above processes were completed, comparison was made between the options ranked highly by the community and the MCA scores. The community rankings aligned closely with the MCA ranked options as well as the recommendations from the Coorong Partnership.

With the comparisons of data and feedback completed, the highest ranked options that could be undertaken in the available budget (top five) were progressed to feasibility assessments.

## Where too from here?

We will continue to engage with the community through each stage of the CIIP. The diagram below shows the Project timeline.



To receive regular HCHB updates and engagement opportunities email [projectcoorong@sa.gov.au](mailto:projectcoorong@sa.gov.au) or visit our website [www.environment.sa.gov.au/topics/coorong/healthy-coorong-healthy-basin](http://www.environment.sa.gov.au/topics/coorong/healthy-coorong-healthy-basin)

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