

MDBA ADVICE ON THE RIVERINE RECOVERY PROJECT BUSINESS CASE

PROPONENT: SOUTH AUSTRALIA

Key points/summary

- The proposal meets the definition of a ‘supply measure’ under the Basin Plan.
- The business case submitted by South Australia contains all the necessary project details.
- The proponent has provided an adequate summary of the ecological values of the site.
- Ecological targets and objectives are considered achievable under the adopted adaptive management framework of the RRP.
- The proponent considers environmental residual risks as low to medium, with key mitigating strategies including adopting an adaptive management approach and appropriate monitoring across RRP wetlands and floodplains. MDBA believes that potential adverse ecological impacts are appropriately addressed by the mitigation measures identified by the proponent.
- The proponent identifies ongoing operational funding as an extreme risk. The proponent suggests mitigation strategies (e.g. investigating alternative funding) may reduce the residual risk to high, however, MDBA does not consider this residual risk acceptable.
- MDBA would like greater detail provided concerning governance arrangements to ensure accountability for ongoing resourcing.
- MDBA would like greater detail provided about land acquisition processes and alternative arrangements to should the proponent fail to reach agreement with landholders to allow access to works for ongoing operation/maintenance.
- Wetland drying will deliver water savings within the SA entitlement flow.

1. Eligibility (3.1)

1.1 Supply measure requirements (3.1.1)

South Australia considers that this proposal reflects the definition of a ‘supply measure’ under the Basin Plan (cl.7.03 and 7.15) in the following text from the Riverine Recovery Project business case submission:

“The Riverine Recovery Project’s Yatco Lagoon and the Phase 1 and Phase 2 Wetlands Project elements are being put forward for consideration under the Basin Plan’s sustainable diversion limit adjustment mechanism as an evaporative saving supply measure project. These project elements of the Riverine Recovery Project produce evaporative water savings and are therefore relevant to the sustainable diversion limit adjustment mechanism. These project elements involve investigations and installation of infrastructure to re-introduce more natural wetting and drying cycles for wetlands. The reduced evaporation associated with more natural cycles is the source of water savings.

The SDL Adjustment Assessment Committee (SDLAAC) has agreed that for proposed evaporative savings projects where an entitlement is created for the environment associated with the evaporative

savings which had the same characteristics as entitlements which could otherwise be acquired through the bridging the gap water recovery programs, then environmental equivalence, as required through the SDL adjustment mechanism, can be directly inferred as the entitlements can be used interchangeably.”

1.2 Measures not included in the benchmark conditions of development (3.1.2)

South Australia has confirmed that the measure was not in the benchmark conditions of development (cl.7.02 of the Basin Plan) in the following text from the Riverine Recovery Project business case submission:

“The Riverine Recovery Project (Yatco Lagoon and Wetlands Project Phase 1 and Phase 2 elements) is a proposed supply measure under the Murray-Darling Basin Plan’s SDL Adjustment Mechanism. This occurs by allowing the quantity of water available to be used for the environment to be increased compared to the benchmark conditions of development. This occurs through generation of evaporative savings in pool connected wetlands and provision of water entitlements associated with the water saved to the Commonwealth Government.”

2. Ecological values of the site (4.2)

A detailed description of the ecological values and features of the sites is provided in each of the wetland management plans (Appendix 2).

3. Ecological objectives and targets (4.3)

Ecological objectives and targets are specified consistent with the assessment criteria in each of the wetland management plans (Appendix 2).

4. Anticipated ecological outcomes (4.4)

4.1 Anticipated ecological benefits (4.4.1)

Anticipated ecological benefits are described in each of the wetland management plans based on the preferred operating regime (Appendix 2). Upon request from MDBA, SA provided additional information on the ability to implement the recommended hydrograph (desired wetland water regime) over the 114 year hydrological record using Savings at Wetlands from Evapotranspiration daily Time-series (SWET) modelling. The analysis presented provides confidence that it is feasible to reinstate the desired wetland management regime under a Basin Plan water recovery scenario albeit the timing may deviate from the preferred operating regime. Hence ecological objectives / targets specified in the management plans appear likely to be achievable in an adaptive management framework which the RRP has adopted.

4.2 Potential adverse ecological impacts (4.4.2)

Potential adverse ecological impacts are assessed with mitigation measures developed for each key risk, including a monitoring program.

5. Hydrology of the area and environmental water requirements (4.5)

5.1 Current hydrology and proposed changes to the hydrology (4.5.1)

Saving water from evaporation by manipulating wetting and drying cycles of a number wetlands within SA Murray:

- Original SWET model is modified to take hydrographic flow data instead of constant flow which seems fit for purpose
- The model and data used are submitted
- Climatic data from nearby sites is used for evaporation rate
- Not enough data is available to confirm elevation (i.e. sill level) data is reasonable. The business case stated that the data were taken from survey, design drawings and DEM. Different assumption may lead to different water saving volume
- Wetland drying will deliver water savings within the SA entitlement flow (assumed to reduce the dilution entitlement 696 GL/yr by a total of 10GL/year). A volume of Class 9 entitlements (environmental) equivalent to these savings will be provided to the Commonwealth (>5 GL already transferred). Using this approach (rather than through “Bridging the Gap”) the Commonwealth may have limited capacity to actively manage this water as it remains part of the 1850GL/yr. entitlement flow – that is CEWH may need to deem associated allocations are fully utilised each year. An accounting schematic interpretation of how the environmental water saving provides for an increase in consumptive diversion is at **Attachment A** for further discussion. An alternative approach (converting entitlements to tradable water products and reducing entitlement flow) may provide additional environmental outcomes along the entire Murray corridor. This approach though may require a reduction in SA entitlement flow.

5.2 Environmental water requirements (4.5.2)

Environmental water requirements are comprehensively described in each of the wetland management plans, including conceptual models that relate the proposed operating strategy with environmental water requirements (Appendix 2).

6. Operating regime (4.6)

None of the Riverine Recovery assets involves the use of any volume of water large enough to impact whole-of-system flows. Therefore, insofar as the criteria apply to whole-of-system operations, the MDBA is satisfied that the criteria in s4.6 have been met. We note that the ecological objectives are limited to local benefits and our comments do not extend to the operating regime at a local level.

7. Assessment of risks and impacts of the operation of the measure (4.7)

Operation and maintenance resourcing appears to be a risk for this project, especially given the large number of sites, the remoteness of the sites and in some cases their location on private land. The summary of risks notes ongoing operational funding as an extreme risk to project success and suggests as a treatment that funding alternative be investigated, reducing the residual risk to high. We do not consider this residual risk acceptable.

At this point in the planning process, we would expect greater detail about the process for establishing governance arrangements that ensure accountability for ongoing resourcing in order to provide assurance to partner governments that the works will be resourced and operated into the future in order to achieve the benefits upon which the SDL adjustment is based.

Furthermore, the estimated operation and maintenance cost for the works is \$800,000 per year appears to be quite low. It may be close for new assets, however, a typical cost estimate for operation, maintenance and renewal for this class of asset is more likely to be in the order of 3% of capital cost. As total capital cost of the combined projects is ~\$55 million, an O&M budget of \$1.65 million would be usual, which is double the estimate provided.

There is insufficient detail about responsibility for on-ground operation of the works. In particular, there is a risk that the works could become impaired if the organisation responsible for operating the works does not have on hand an experienced engineering crew to promptly dispatch repairs, especially following high flows. The sheer number of individual works, the remoteness of the works and their location on private land compounds this risk. We would like an assurance that DEWNR has access to such expertise and a commitment that they will resource this expertise for the life of the works.

There is insufficient information about monitoring and reporting to support operations and allow for adaptive management. Without ongoing monitoring data, there is a risk that the operation of the works will compromise the delivery of ecological benefits, or that opportunities to improve operation of the works will be missed.

There is insufficient information about land acquisition processes and alternative arrangements should DEWNR be unable to reach agreements with landholders to allow access to the works to undertake operation and maintenance on an ongoing basis. We would expect an assurance that there will be permanent arrangements in place that will survive a change in ownership so that the works can continue to be operated into the future in order to achieve the benefits upon which the SDL adjustment is based.

Due to dependence of this project on the completion of earlier phases of Riverine Recovery Project, there is a risk that all proposed works cannot be constructed and therefore environmental outcomes not achieved (e.g. due to higher than anticipated construction cost of an earlier phase). It is unclear whether these phases would be accountable under the SDL adjustment process if incomplete.

Water quality risks and impacts of the operation of the measure in relation to salinity, pH, dissolved oxygen and turbidity have been identified and analysed in the individual wetland reports. Other water quality types outlined in Chapter 9 of the Basin Plan could be analysed similarly. Threats, possible impacts and mitigation measures have been addressed.

8. Complementary actions and interdependencies (4.9)

No response from MDBA.

9. Project governance and project management arrangements (4.11)

9.1 Legal and regulatory requirements (4.11.2)

Not applicable as this is an existing project.

Attachment A – accounting schematic for further discussion

