

## MDBA ADVICE ON THE SOUTH EAST FLOWS RESTORATION 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.
- The proponent considers environmental risks low to moderate, and these will be mitigated by adopting an adaptive management approach. MDBA suggests there is insufficient information about reporting and monitoring provided to support operations and allow for adaptive management.
- The proponent identifies the ability to deliver the project within budget as a high risk to be mitigated by robust project management processes. MDBA suggests insufficient information has been provided about resourcing and administration of ongoing operations and maintenance. MDBA would like greater detail provided concerning governance arrangements to ensure accountability for ongoing resourcing.
- The proponent identifies gaining access and investing in infrastructure on private land as a high risk even with mitigation strategies in place. 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.
- The exact nature of changes to the hydrology of the South Lagoon has not been determined as the operating strategy has not been finalised.

#### 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 South East Flows Restoration Project business case submission:

*"The SEFRP meets the criteria of a supply measure that operates to increase the quantity of water available to be taken compared with that under the benchmark conditions as specified in Schedule 6 of the Basin Plan. Furthermore, advice provided by the Murray-Darling Basin Authority during Phase 1 Assessment of the SEFRP indicates that the default method to determine the SDL adjustment can be used to assess the SDL adjustment potential of the SEFRP."*

## **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 South East Flows Restoration Project business case submission:

*“The measure is not included in the benchmark conditions of development. The drain alignment proposed as part of SEFRP is yet to be constructed, and as such, not included in the inflows to the Coorong South Lagoon used in the benchmark model.”*

## **2. Ecological values of the site (4.2)**

A detailed description of the ecological values and features of the site is provided (Appendix 1 and 3).

## **3. Ecological objectives and targets (4.3)**

Ecological objectives and targets are specified consistent with the assessment criteria (Appendix 1 and 3).

## **4. Anticipated ecological outcomes (4.4)**

### **4.1 Anticipated ecological benefits (4.4.1)**

Ecological benefits are adequately described. As outlined in the business case, flows from the South East region of South Australia primarily influence the salinity of the Coorong South Lagoon. The benefits of the project to increase resilience of the Coorong South Lagoon are well justified and supported by studies and hydrologic/hydrodynamic modelling.

Preliminary assessment has been provided of the performance of the SEFRP against the Limits of Change Coorong salinity and Murray Mouth depth metrics as listed in S6.07c of Schedule 6. This analysis indicates that the Coorong South Lagoon Limits of Change are unlikely to limit any initial changes to the SDLs though there is an increased likelihood it may become a factor as the adjustment volume increases. The analysis shows SEFRP has potential to maintain Limits of Change as the SDL adjustment increases.

As per MDBA's advice on the Phase 1 assessment, the SDL adjustment potential of this project will also be dependent on further investigations of whether less water can be called from Hume as a result of South East flows. The business case states *‘Overall the SEFRP does not replace the requirement for barrage flows but is complementary’*.

### **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 (Appendix 2). Provision of the EPBC referral would further assist with the assessment against this criteria although sufficient information is provided for Phase 2 assessment.

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

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

The operating strategy has not been finalised so the exact nature of changes to the hydrology of the South Lagoon have not been determined. In assessing additional flows due to the project, the model has been modified to implement different operation depending on the previous year's salinity level at South Lagoon. There is not enough supporting materials to confirm this operation is practically achievable.

The water requirements of local wetlands have been taken into account by removing the first 4 GL diverted out of the Blackford Drain per year from the time series of flow into the Coorong South Lagoon. The 4 GL figure is an estimate of the wetlands storage volume and as such is likely a conservative estimate.

The scale and level of detail of the modelling is fit for purpose. The model appears to have been calibrated although there is little supporting evidence provided. An appendix to the business case states "*details of model accuracy are provided in Wood and Way (2011)*" but this document has not been provided.

### **5.2 Environmental water requirements (4.5.2)**

Environmental water requirements are comprehensively described (Appendix 3) noting that the final operating strategy has not been confirmed which means that the exact nature of changes to the hydrology of the South Lagoon is not known. Sufficient information is provided for Phase 2 assessment to understand the SEFRP and represent within the hydrological models.

## **6. Operating regime (4.6)**

The South East Flows Restoration Project does not involve 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.

A detailed operating regime has not been provided, however the initial proposal of potential operating regimes appears to be appropriately conservative with respect to achieving the intended ecological benefits.

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

There is insufficient information about the resourcing and administration of ongoing operations and maintenance. The risk register notes the lack of direction and clarity around ongoing arrangements for operation and maintenance as a moderate risk and that with clear governance arrangements that allow for adaptive management, this risk can be reduced to a low risk. However, the documentation gives no indication as to how such arrangements might be reached. The risk is understated in that lack of resources for operations and maintenance would result in asset impairment quite quickly.

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.

There is insufficient information about monitoring and reporting to support operations and allow for adaptive management. Without ongoing monitoring, 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 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 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 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. The risk register lists difficulties with gaining access to private land and associated issues with investing in infrastructure on private land as high risks that remain high even after treatment.

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.

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)**

The business case has identified the SEFRP is complementary to the Coorong Lower-Lakes Murray Mouth (CLLMM) Recovery Project and the CLLMM Recovery Project's Ngarrindjeri Partnerships. Also, as a complementary activity to native vegetation clearance and management, the SEFRP will target the re-establishment of up to 70 hectares of vegetation communities.

## **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.