24. Conclusion and recommendations

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24.1 Overview

This chapter addresses Part B, Section 11 of the terms of reference for the draft environmental impact statement (EIS) for the Lower Fitzroy River Infrastructure Project (Project). This chapter draws conclusions and makes recommendations with regard to the Project based on the environmental impact assessment undertaken for the Project, the environmental management plan (EMP) developed (Chapter 23) and legislation and policy requirements (Chapter 3 Legislation and project approvals).

24.2 Conclusions and recommendations

In December 2004, in response to a prolonged and severe drought in Central Queensland, the Queensland Government, at a regional level and in partnership with local government, committed to developing the Central Queensland Regional Water Supply Strategy (CQRWSS) (DNRW 2006) as a long term water supply strategy for the region. The Lower Fitzroy River system was identified as a main water supply source to meet the urban and industrial water demand needs of the Lower Fitzroy and the Gladstone regions. The CQRWSS identified that additional infrastructure on the Lower Fitzroy River was required in order to provide the appropriate reliability of supply (mainly for high priority water). The Project, comprising of the raising and operation of the Eden Bann Weir and the construction and operation of Rookwood Weir, was identified as appropriate infrastructure to satisfy future water supply requirements. Associated Project components to the development of these weirs include fauna passage infrastructure, upgraded river crossings and new and upgraded access to the weir sites.

The Project is proposed to operate in concert with the existing Fitzroy Barrage. Releases will be made from the Rookwood Weir to the Eden Bann Weir and then to the Fitzroy Barrage through 'run of river' methods.

The Gladstone Area Water Board (GAWB) and SunWater Limited (SunWater) were nominated as proponents for the Project.

The Water Resource (Fitzroy Basin) Plan 2011 (Fitzroy WRP) legislates that a nominal volume of 76,000 ML is available for strategic water infrastructure on the Fitzroy River as supplemented water from the strategic water infrastructure reserve. The Project is recognised as strategic water infrastructure to which allocations may be granted.

The Fitzroy Basin Resource Operations Plan (Fitzroy ROP) implements the Fitzroy WRP and specifies nominal reserve volumes for urban and industrial supplies in the Gladstone and Capricorn Coast regions in association with the development of the Project as follows:

- GAWB: up to 30,000 ML of the reserve for urban and industrial water supplies
- Local government authority: up to 4,000 ML of the reserve for urban water supplies for the Capricorn Coast
- A person or entity: up to 42,000 ML of the reserve. The Fitzroy ROP does not specify the intended use of the remaining 42,000 ML.

Future demands for water are difficult to predict. It is also noted that since the 2004-2007 drought that stimulated investigations into the Project, generally greater than average annual rainfall and widespread flooding has been experienced in the region, until recently when drier conditions have again been prevalent. It is acknowledged that, as at June 2015, the demand for water that the full Project development can deliver has not been realised. A staged approach to development is therefore proposed which will enable proponents to respond to potentially smaller demands in the short-term and

progressively respond to increasing and/or larger demand requirements in the longer term through intermediate infrastructure builds until, as the ultimate scenario, full development of the Project is reached. The current Project concept/preliminary design is modular to facilitate staging of construction in order to respond quickly and efficiently to progressively increasing demands.

Table 24-1 provides a summary of theoretical yields that the Project is predicted to supply at different stages. It is acknowledged that some of development scenarios listed in the table achieve yields in excess of the strategic water infrastructure reserve volumes referred to above. Nevertheless, they are included here for comparison purposes.

Table 24-1 Theoretical Project yields

Infrastructure scenario	Theoretical Project yield (ML/a) (high priority supplemented supply)
Eden Bann Stage 1 (existing)	0
Eden Bann Stage 2	35,000
Eden Bann Stage 3	50,000
Rookwood Stage 1 (with existing Eden Bann Stage 1)	54,000
Rookwood Stage 1 and Eden Bann Stage 2	77,000
Rookwood Stage 1 and Eden Bann Stage 3	87,000
Rookwood Stage 2 (with existing Eden Bann Stage 1)	86,000
Rookwood Stage 2 and Eden Bann Stage 2	105,000
Rookwood Stage 2 and Eden Bann Stage 3	110,000

Assessment has been undertaken for environmental, social, cultural and economic values in relation to the Project. The Project is located in a rural area that consists predominantly of large, rural agricultural (cattle grazing) land holdings. Settlement in the area is sparse and scattered.

Potential impacts associated with construction activities, as identified through the environmental impact assessment undertaken for the draft EIS, have in the first instance been avoided through design. Where potential impacts cannot be avoided, mitigation and management measures have been included within the EMP. Potential construction impacts addressed in the EMP include the loss of remnant vegetation and fauna habitat, elevated noise levels and increased dust nuisance, increased traffic volumes and degradation of water quality through erosion and sedimentation. The EMP will inform the development of the construction EMP (CEMP) which will be implemented to mitigate and/or manage the localised and relatively short term construction-related impacts. Benefits from the construction phase will include employment opportunities and opportunities for the provision of services to the Project with associated economic spinoffs.

Benefits during operation of the Project will include the provision of a secure of water supply to support urban and industrial growth. Consequently, social and economic benefits are expected to be significant at a local, regional and national level.

Unavoidable impacts as result of impoundment at the weir sites (within the river bed and banks) mainly include the loss of some riparian vegetation and fauna habitat and a restriction of movement of aquatic species. Social impacts will arise in relation to the loss of some existing uses of riparian land and access to riparian land by adjacent landholders. The Project proponents are committed to undertaking individual negotiations with directly impacted landholders to develop compensation strategies in this regard.

Project design, implementation of the EMP and development of an operational EMP (OEMP), the provision of offsets and the implementation of an amended Fitzroy ROP will ensure that operational impacts are mitigated and managed appropriately.

Conservation significant species, including those listed as matters of national environmental significance, predicted to be impacted by the Project include some areas of Brigalow (*Acacia harpophylla* dominant and co-dominant) threatened ecological community, a number of individual black ironbox (*Eucalyptus raveretiana*) trees and Fitzroy River turtle (*Rheodytes leukops*) habitat. In addition to the EMP and species management programs that will be implemented to mitigate and manage impacts on these species, offsets are proposed to satisfy State and Commonwealth requirements.

An EMP has been presented in this EIS and addresses the environmental management commitments for the construction and operational phase of the Project. The EMP will be further developed and will inform the development of a detailed CEMP and OEMP. These EMPs will include species management programs. The EMPs will:

- Build on the commitments to environmental performance made in the Project EIS
- Provide a framework to protect the environmental values potentially affected by the Project
- Set out environmental management obligations for environmental authorities and permits to assist the authorities when developing project approvals and associated conditions.

Implementation of the final EMP, CEMP and OEMP will ensure that the Project achieves sustainable outcomes. The Project is not expected to contribute significantly to cumulative impacts at a local and regional scale.

The outcomes of specialist studies, community consultation and stakeholder engagement, along with regulatory requirements, codes and guidelines all form the framework for of the EMP and commitments made by GAWB and SunWater in relation to the Project.

Project commitments range from broad social, cultural and economic commitments, through to measures required to protect environmental values specific to the Project area, inclusive of offset proposals. They include further investigations, field work and monitoring required at various stages of the Project. These documented commitments (documented in Appendix W) are a part of an ongoing strategy to meet EIS obligations.

Based on the findings of the EIS and given implementation of the EMP and offsets proposals, it is considered that the Project can be undertaken without unacceptable social, environmental or cultural impacts. The Project also presents a range of opportunities and positive benefits to local, regional, State and national economies.