

LOWER FITZROY RIVER INFRASTRUCTURE PROJECT

FITZROY RIVER TURTLE

The Fitzroy River turtle (*Rheodytes leukops*) is listed as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the Queensland *Nature Conservation Act 1992*. The Fitzroy River turtle is one of a unique group of Australian freshwater turtles that can extract oxygen from both the air and the water.

Habitat and distribution

The Fitzroy River turtle is endemic to the Fitzroy Basin catchment with the species' distribution extending from the Fitzroy Barrage to the upper reaches of the Dawson, Nogoa and Connors Rivers¹. The Project footprint is considered to support an important population of the Fitzroy River turtle. The species is known to occur within both the Eden Bann Weir and Rookwood Weir Project footprints and in areas upstream and downstream.

Nesting is generally restricted to alluvial sand/loam banks which are deposited during flood events¹. The largest known nesting aggregation for the species occurs approximately 40 km downstream of Eden Bann Weir at Alligator Creek.

Threatening processes

The biggest threat to the survival of the Fitzroy River turtle is the lack of recruitment into the population¹. Predation of nesting banks by feral animals, goannas and water rats and trampling of nests by cattle results in extremely poor survival of egg clutches¹.

Other threatening processes include loss of habitat, alteration of natural flow regime, movement barriers, physical injury and mortality and poor water quality¹.

Project impacts

The potential impacts on the Fitzroy River turtle that may arise as a result of the Project include:

- Loss or alteration of foraging and sheltering resources
- Loss of confirmed and potential nesting habitat
- Potential injury and mortality
- Degradation of habitat
- Restriction of upstream and downstream movement
- Reduction in heterogeneity of aquatic habitats

A detailed assessment of Project impacts on the Fitzroy River turtle has been undertaken as part of the environmental impact assessment including mitigation and management actions. Significant residual impacts are considered likely to remain in relation to operation of the Project and offsets are proposed.



Photograph 1: Fitzroy River turtle



Photograph 2: Potential Fitzroy River turtle nesting habitat in Rookwood Weir Project footprint

Species management program

A species management programme for the Fitzroy River turtle has been developed to provide a framework for the management of impacts throughout the life of the Project. The species management program describes measures to be implemented to avoid and minimise the potential impacts including but not limited to:

- Design features specific to turtle protection
- Turtle passage facility to be included in final detailed design
- Implementation of weed management and feral animal control plans
- Relocation of all turtles and eggs identified during pre-clearance surveys and salvage activities
- Actions to re-establishment of turtle aquatic and nesting habitat within the impoundments
- An operational phase Turtle Monitoring Program will be developed and implemented in consultation with the Department of Environment and Heritage Protection
- Implementation of a turtle movement study during detailed design. This study will continue as part of the five year (minimum) Turtle Monitoring Program during operation to evaluate the performance of the turtle ramps.

Project offset

The protection and management of turtle nests is proposed to offset the Project's impacts on this species. The protection and management of nests will target Project specific impacts as well as address the key processes currently threatening the survival of the species throughout the catchment. These actions will reduce nest predation, increase population recruitment and promote the recovery of the species. In addition to this, a financial settlement offset is proposed for the Project's residual impacts to aquatic habitat.

Source: 1. Limpus, C.J., Limpus, D.J., Hollier, C., Savige, M., McAllister, D. 2011, 'Survey of Freshwater turtle populations and nesting habitat, Tarrus Weir Turtleway Project', Brisbane Department of Environment and Heritage Protection, Queensland Government.



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