LOWER FITZROY RIVER
INFRASTRUCTURE PROJECT

Appendix Y

Consolidated mitigation measures

Environment Protection and Biodiversity Conservation Act 1999

SunWater
MAKING WATER WORK

Gladstone Area Water Board

Consolidated list of EPBC Act mitigation measures

In addition to the environmental management plan (EMP) and environmental management system (Volume 1, Chapter 23 and Volume 2, Chapter 14, respectively) described for the Lower Fitzroy River Infrastructure Project (Project) this appendix provides a consolidated list of mitigation measures to be implemented to limit potential impacts to relevant to the controlling provisions for the Project under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), these are:

- World Heritage properties (Sections 12 and 15A)
- National Heritage places (Sections 15 B and 15C)
- Listed threatened species and communities (Sections 18 and 18A)
- Listed migratory species (Sections 20 and 20A).

The following details are provided for each value:

- mitigation measures
- responsible agency for endorsement or approval
- cross-reference to element of the environmental impact statement.

Value	Mitigation	Agency responsible[1]	Reference
River morphology and stream flow hydrology	To mitigate impacts to river morphology and stream flow hydrology, the following measures would be implemented: • Detailed geomorphic site assessment will be undertaken and include: – A geomorphic condition assessment at selected sites upstream of the future inundation area, within the future ponded area and downstream of the weir – Stability assessments to describe pre-development characteristics of the river bed and banks, channel stability, the potential for slumping failure and erosion, amongst others. This will provide baseline conditions and establish the required stabilisation strategies to be implemented during construction – Further to geomorphic assessment, identify key indicators for long-term monitoring of geomorphic and fluvial characteristics and stream stability within the project development and immediate downstream stability risk area as part of an adaptive management programme. • In the event that scouring, erosion and slumping do occur during construction or operations, undertake rehabilitation and restoration of impacted areas in accordance with protocols and guidelines as defined in the draft Water Management Programme.	Department of Environment and Heritage Protection (DEHP)	Chapter 8 (General impacts) Section 8.2.4 Changes to river morphology (fluvial processes)
Water quality (construction phase)	To mitigate impacts to river water quality, the following measures would be implemented during the construction phase: • Undertaking in-stream works during drier periods and sequencing works to avoid periods of high flows and rainfall events construction impacts will be managed through development and implementation of a Construction EMP, inclusive of erosion and sediment controls. Management measures will include the following: – Significant ground disturbing activities (including embankment excavations and construction of coffer dams) are scheduled to be undertaken during drier seasonal periods reducing the potential for erosion and sediment laden runoff entering the watercourse – Installation of diversions and erosion controls such as sediment basins (amongst others) will direct clean water away from construction areas and allow site affected water to settle prior to re-entering the river. Diversions and erosion controls, including sediment basins will be designed having regard to Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites (Institution of Engineers Australia 1996) (or similar) and Urban Stormwater Quality Planning Guidelines 2010 (Department of	DEHP	Chapter 8 (General impacts) section 8.3.1 Construction phase

[1] Agency responsible for endorsing or approving mitigation measures

Value	Mitigation	Agency responsible[1]	Reference
	Environment and Resource Management 2010), including requirements for emergency planning as applicable • Wastewater from all sources will be stored, treated and tested prior to release to the environment having regard for water quality objectives defined in the EPP Water (for the Fitzroy River Sub-basin in particular) • Clearing of vegetation for site facilities and access will be restricted to minimum areas required to undertake the works reducing the extent of exposure of soil to erosion influences • Storage and use of potentially contaminating and polluting materials such as hydrocarbons, service and refuelling areas will be restricted to defined and protected (bunded) areas • Storage and handling of any actual contaminants will comply with relevant guidelines and Australian standards.		
Water quality (operation phase)	To mitigate impacts to river water quality, the following measures would be implemented during the operational phase: • During detailed design, operational strategies (including initial operation) will be developed including water quality monitoring programs covering upstream, impoundment and downstream environments. Differential offtakes will facilitate mixing to improve the quality of water released. • Weir operations will generally mimic natural river flows and the weirs will reach full supply volumes and will be drawn down annually	DEHP	Chapter 8 (General impacts) section 8.3.2 Operational phase

Value	Mitigation	Agency responsible[1]	Reference
Terrestrial flora	To mitigate the loss of vegetation resulting from construction site clearing activities, the following measures would be implemented: • Clearing for site works will be restricted to the smallest practical area and only where necessitated by the approved construction of roads, services, access and cut and fill. The amount of time the area is cleared prior to construction will also be minimised • Clearly demarcate no-go areas of highly sensitive vegetation, including all vegetation not to be cleared. All vegetation to be retained should be surveyed and clearly demarcated • Where practicable, revegetation activities would be commenced in and adjacent to construction areas as soon as possible after the completion of construction • Temporarily disturbed areas will be rehabilitated to replicate as closely as possible the habitat resources available prior to construction. This will include: • Utilising stockpiled topsoil and chipped and mulched was during landscaping and revegetation efforts • Revegetating areas that are temporarily disturbed using local indigenous species appropriate to the position in the landscape • Regular post-construction monitoring of rehabilitation areas. Refer to Chapter 23 EMP for further detail on rehabilitation. Impacts on threatened ecological communities and threatened terrestrial flora species are assessed in Chapter 10 Threatened species and ecological communities.	Commonwealth Department of the Environment (DoE), DEHP	Chapter 8 (General impacts) Section 8.4.1 Impacts on terrestrial flora
Terrestrial fauna	To mitigate impacts to terrestrial fauna during the construction phase the following measures would be implemented: • Enforcing on-site speed limits to restrict the incidence of vehicle strike • Minimising the need to travel near dawn or dusk by adhering to defined daytime work hours • Educating employees regarding the presence of conservation significant fauna • Erecting temporary fencing to exclude mobile animals such as macropods, echidnas and livestock from the construction area • Establishing stock fencing, gates and cattle grids on the new permanent access road as required • Checking of trenches, excavations and machinery daily for the presence of reptiles • Ensuring fauna spotters present prior to and during clearing activities • Clearly demarcating no-go areas in relation to highly sensitive vegetation, including all vegetation not to be	DoE, DEHP	Chapter 8 (General impacts) Section 8.4.2 Impacts on terrestrial fauna

Value	Mitigation	Agency responsible[1]	Reference
	cleared • Conducting sequential clearing of vegetation to allow resident fauna the opportunity to disperse away from the immediate construction area • Ensuring a suitably-qualified and licensed practitioner to be present on site to treat or euthanize injured animals. • Proposed mitigation during the construction phase to minimise the impacts of noise, light and vibration disturbance include: • Servicing and maintaining all plant and equipment to minimise machinery noise as much as possible • Inspecting work areas daily for the presence of fauna and if found relocating fauna away from work areas • Minimising night works by adhering to defined daytime work hours • Employing directional lighting with protective guards. To minimise habitat degradation due to construction activities, the following mitigation measures will be implemented: • Preparing and implementing a Weed Management Plan that outlines practices to prevent the introduction of new weeds minimise the spread of declared weeds (Section 8.9) • Ensuring erosion and sediment control measures employed during construction are consistent with the practices described in the International Erosion Control Association, Best Practice Erosion and Sediment Control Guideline and/or Queensland Division of the Australian Institute of Engineers' Erosion and Sediment Control: Engineering Guidelines for Queensland Construction Sites • Restricting speed limits and other traffic control mechanisms to minimise the generation of dust • Rehabilitating disturbed ground surfaces as soon as is practicable to minimise exposed surface periods • Maintaining suitable soil stockpiles, rubbish and waste materials on site until disposal • Developing a Waste and Hazardous Materials Management Plan including fuel and chemical storage protocols and spill responses. To mitigate impacts to terrestrial fauna during the operation phase the following measures would be implemented: • Inform all operation personnel of their environmental responsibility with respect to minimising the risk of fauna injury or mortality. Site inductions will include information on the identification of the Fitzroy River turtle, white-throated snapping turtle and estuarine crocodile, location of any confirmed nesting habitat areas within or adjacent to the weir and relevant management actions.		

Value	Mitigation	Agency responsible[1]	Reference
	• Restrict speed limits and other traffic control mechanisms to minimise the generation of dust • Educate employees regarding the presence of the EPBC Act and NC Act listed squatter pigeon and other fauna and livestock on access roads. • Implement the draft Nature Conservation Management Programme.		
Aquatic ecology	To mitigate impacts to aquatic habitat during the construction phase the following measures would be implemented: • Construction schedule of river crossing at Glenroy Crossing will be designed to avoid construction works that may impact on turtle habitat during the peak turtle nesting and hatching season (September to March) • Construction footprints will be kept to the minimum amount necessary • Construction footprints will be clearly marked with construction tape • Resource extraction will not occur in Fitzroy River turtle important habitat areas (e.g. mapped essential habitat) or from within historical, confirmed or high potential turtle nesting habitat • Water flows downstream of the construction areas will be maintained to prevent the drying of aquatic habitat and to maintain water quality • Weir construction will be primarily undertaken over two consecutive dry seasons when flows within the river are low and natural/existing conditions will be maintained for as long as possible to minimise degradation of habitat downstream • Night lighting will be minimised where practicable. No lighting shall be placed in the vicinity of a confirmed turtle nesting habitat adjacent to the construction areas. Any lighting installed will be designed and mounted so that no spill over light occurs within these habitat areas (such as directional lighting with protective guards) • A Drainage, Erosion and Sediment Control Plan will be developed and implemented. Management actions will be in accordance with the Best Practice Erosion and Sediment Control Guidelines (International Erosion Control Association (IECA) 2008) • A Water Quality Management Plan will be developed and implemented in accordance with the Project Construction EMP • A Waste and Hazardous Materials Management Plan will be developed and implemented. • Aquatic habitats immediately upstream and downstream of the construction footprints and river crossing construction areas will be monitored for signs of degradation during the construction phase. Aquatic fauna in isolated pools will be relocated if conditions have deteriorated or are considered likely to deteriorate. • All construction personnel will be informed of their environmental responsibility with respect to the protection of	DoE, Department of Agriculture and Fisheries	Chapter 8 (General impacts) Section 8.5 Aquatic ecology

Value	Mitigation	Agency responsible[1]	Reference
	aquatic fauna and their habitat. Site inductions will include information on the location of important habitat and potential turtle nesting habitat to prevent disturbance and/or destruction of these areas. Management actions relevant to the protection of aquatic habitat will be discussed and responsible persons identified. The following mitigation measures are proposed to avoid/minimise the potential impact of Project commissioning and operation on aquatic ecological values: • Riparian vegetation within the impoundments will not be cleared prior to inundation and large woody debris will be retained. This will provide (in the short-term) sustained micro-habitats and resources for some species. It is expected however that over time vegetation will dieback and new vegetation will emerge in riparian areas above the full supply level • The re-establishment of aquatic habitat within the impoundment will be encouraged through the following actions: – Avoiding rapid drawdowns of the storage area and controlling water levels to allow for the stabilisation of aquatic habitat around the margins of the impoundment – Rehabilitating and restoring areas impacted by scouring, erosion and slumping – Promoting the natural regeneration of trees and shrubs – Controlling introduced weeds and feral animals in accordance with the Project Weed Management Plan and Feral Animal Control Program. The following mitigation measures are proposed to minimise the potential impact of the Project as a result to changes to the downstream flow regime: • The operation strategy of the weirs will be dictated by the environmental flow objectives defined in the Fitzroy WRP and implemented through the Fitzroy ROP (as amended). These objectives will aim to minimise environmental impacts as a result of the water infrastructure and will mimic natural flow conditions as much as possible. Where required, yield adjustments and operating rules will be amended to comply with the Fitzroy WRP and Fitzroy ROP • Subject to compliance with the Fitzroy WRP and Fitzroy ROP, water release volumes and timing will be controlled to minimise the inundation of turtle nests downstream of the weir during nesting season. Further modelling will be undertaken during detailed design to facilitate this • As part of the operational phase Turtle Monitoring Program, important nesting habitats downstream of the Project footprint (Alligator Creek) will be monitored for signs of degradation as a result of changes in the downstream flow regime.		

Value	Mitigation	Agency responsible[1]	Reference
	The following measures would be implemented to avoid/minimise injury and mortality to aquatic fauna during construction: • Prior to any initial or new disturbance to aquatic habitat within the construction areas, all impact areas will be inspected by a fauna spotter/catcher for the presence of aquatic fauna. Pre-clearance surveys will be undertaken immediately prior to disturbance works. Aquatic fauna captured will be relocated and relevant measures implemented to exclude fauna access to active constructions areas (e.g. erection of exclusion fencing/netting, bund walls) • A fauna spotter/catcher will be located on site during all works that have the potential to cause injury or mortality to aquatic fauna located in the area. The fauna spotter/catcher will identify, capture and relocate aquatic fauna and/or nests as required to avoid impact. • If injury occurs, injured fauna will be immediately removed and taken to a qualified veterinary or wildlife carer for treatment. Suitable veterinarians and wildlife carers in nearby areas and Rockhampton will be identified and commercial arrangements established to guarantee the financial costs of treatment and rehabilitation • All construction personnel will be informed of environmental responsibility with respect to minimising the risk of fauna injury or mortality. Site inductions will include information on the identification of conservation significant species, location of any confirmed nesting habitat areas within or adjacent to the construction areas and relevant management actions The weir operating strategy will avoid/minimise risk of aquatic fauna injury and mortality. Specific operational actions will include: • Controlling the flow of water through release values to provide gradual increments in water release volume • During planned releases, increase water release during dawn and dusk periods when turtles are more likely to be away from weir infrastructure • Operate the flood gate next to the fishway independently and initiate the gate opening sequence with this gate to build tailwater in the stilling basin. The following mitigation measures are proposed to minimise impacts on aquatic fauna due to impeded up and downstream passage: • A fishway design process has been undertaken in accordance with Queensland Fisheries Design Process criteria. This process involved the selection and refinement of fishway design specifications and success criteria and the development of fishway designs for both Eden Bann Weir and Rookwood Weir. State fish biologists participated in the fishway design process and provided key technical input and review.		

Value	Mitigation	Agency responsible[1]	Reference
	• A Fish Monitoring Program will be designed and implemented to monitor the effectiveness of fish passage infrastructure. The monitoring program will be undertaken annually for a period of five years and will include areas upstream of the inundation area, within the impoundment and downstream of the weirs • A species specific and Project specific turtle passage facility (turtle ramp) is currently designed to concept level for each weir. Discussions with the Queensland Department of Environment and Heritage Protection will be held during the detailed design phase to further refine the design of the turtle ramp at each weir from concept through to detailed design, including the establishment of success criteria. Operability of the turtle ramps will be maintained through the life of the Project. A detailed description of the turtle ramp design features is provided in Appendix L • A monitoring program will be developed and implemented to evaluate the performance of the turtle ramps at each weir.		
Extreme environmental events	The following mitigation measures will be implemented to reduce bushfire risk: • Construction areas will be cleared of vegetation that may present a fire risk • If any vegetation needs to be burnt, it will be done in consultation with the local emergency department and in accordance with permits and approvals • Fire breaks will be maintained around areas identified as being potential sources of ignition • Bushfire response measures will be incorporated into the site incident management plan and on-site firefighting capability will be maintained • Staff will be educated in relation to bushfire prevention • Staff will be trained in procedures for welding, and other activities with high risk of starting fires.	Queensland Fire and Emergency Services (QFES)	Chapter 8 (General impacts) Section 8.7 Extreme environmental events

Value	Mitigation	Agency responsible[1]	Reference
Hazardous substances	The following mitigation measures would be implemented to reduce risks associated with the use, transport, handling and storage of hazardous substances: • Establish health and safety management systems in consultation with emergency services as necessary and applicable • Trucks used to transport hazardous substances from Rockhampton will comply with all aspects of the ADG Code • Aboveground storage tanks will be designed as per AS 1940:2004 – The storage and handling of flammable and combustible liquids • Acetylene bottles will be kept upright, in the secure area within the stores compound on a firm floor to prevent falling. Bottles will not be stored near sources of ignition, oxidising agents, poisons, flammable liquids or combustible materials • The contractor responsible for transport of ammonium nitrate will comply with the requirements of AS1678.5.1.002-1998 Emergency procedure guide – Transport Ammonium nitrate • Explosives storage will be approved under the Explosive Act 1999. Explosives storage and use on site will meet the requirements of AS 2187:1998 Explosives – Storage, transport and use and AS 4326-2008 The storage and handling of oxidising agents • The explosives storage area design will: – Be located away from the waterways, drains, channels or pits – Be located away from possible sources of heat, fire or explosion, such as oil storage, flammable liquids and combustible materials – Be established such that it can be secured and will be designed in compliance with the size and volume of explosives on site. Bund containment and earth mounding will be constructed on-site and the explosives area installed with security monitoring • All tank transfer operations will be conducted on impervious surfaces. A dedicated fuel tanker delivery and turn around area is to be provided to minimise risk of vehicle accident. Dedicated filling points for on-site fuel trucks will also be provided with impervious surfaces and containment using rollover bunds • Activities using oils will generally be conducted on a hard stand area, and drip trays will be provided at appropriate locations including during the transfer operations • Regular inspection of the storages and piping will be done by the construction staff	QFES Department of Transport and Main Roads (DTMR)	Chapter 8 (General impacts) Section 8.8 Hazardous substances

Value	Mitigation	Agency responsible[1]	Reference
	• Daily checks of the bunds for stormwater accumulation will be undertaken and procedures developed for management of water in the bunded areas. No contaminated stormwater will be discharged to the river • Regular inspections and maintenance will be planned for all electrical equipment and fittings • Adequate security provisions and access control will be provided for the storage areas • A pest control system will be provided to limit the potential for damage from animals (including stock) • Smoking will be prohibited outside of designated areas and 'no smoking' notices will be prominently displayed • Spill kits will be available for placement on spillages to assist with clean up. The material will be collected and placed in a labelled container for disposal off-site through a licensed contractor • All spillages will be prevented from entering drains or water courses. Absorbent material will be placed on the spillages which will be collected for disposal and any contaminated soil removed to a bioremediation pad • Suitable firefighting systems will be provided. In the event of fire, emergency response will include the use of carbon dioxide, dry chemical or foam and personnel who engage in emergency response activities will wear breathing apparatus • On-site emergency response teams will be trained to undertake the necessary actions to address fire and other incidents that may arise with areas used for storage of hydrocarbon products and other hazardous materials • Personal protective equipment (PPE) for exposure control will consist of impervious material gloves for hand protection, safety glasses or face shield for eye protection and suitable personal clothing for body protection. All PPE will conform to the relevant Australian Standards • Other precautions which will be taken include prompt cleaning of spillages, keeping walls, floors and equipment clean, and locating electrical equipment where it cannot come into contact with the stored materials • Public access to the construction site will be prohibited.		
Weed and pest species	To reduce the likelihood of introduced animals becoming more prevalent within and adjacent to the construction footprints the following mitigation measures would be implemented: • All rubbish and other refuse that may potentially attract vermin, insects and pests (food scraps) should be appropriately disposed of in sturdy waste disposal receptacles that are frequently emptied • No domestic animals should be allowed on the construction site • Manage pest species in coordination with adjacent landholders and catchment management groups.	DEHP	Chapter 8 (General impacts) Section 8.9 Weed and pest species
Socio	The following measures have been implemented and/or are proposed to mitigate and manage social impacts:	DEHP	Chapter 8

Value	Mitigation	Agency responsible[1]	Reference
economics	• A Stakeholder Engagement Plan/Strategy has been prepared for the Project. The strategy is ongoing and includes a range of communication techniques such as a Project website, a 1800 number, dedicated email address, and Project updates and information sessions at key milestones. • A Near Neighbour Policy and a Grievance Management Process (or similar) will be developed and implemented to monitor and record complaints to ensure any stakeholder or community concerns are addressed appropriately and in a timely manner. • A Project Land Acquisition Strategy has been facilitated through the appointment of dedicated land liaison officers for key periods during Project planning. Landholders potentially directly impacted by the Project, have had the opportunity to discuss how their properties and businesses operate (inclusive of existing and future water entitlements) for consideration within the environmental impact statement. • Issues relating to the loss of land and/or loss of access to land along with impacts on productivity will be negotiated and agreed on a one-on-one basis with directly impacted landholders. Consideration will be given to the use of the land, relocation of temporary infrastructure as far as is practicable and reinstatement and rehabilitation. Further advance and ongoing communication with regard to the Project will facilitate that individuals are able to plan for their own operational needs. A draft Land Access Protocol has been developed and implemented. This included: • Seven days advance notice of access requirements • Liaison with landholders regarding their land activities at the time of the access (for example mustering, sensitive stock) • All Project personnel to be identifiable through letters of introduction and clear explanation to landholders of activities proposed. A draft Weed Management Plan has been developed and implementation will continue through the construction and operation phase. A recruitment plan will be developed including the provision of appropriate contractual arrangements with construction contractors and the use of local recruiters, that will facilitate opportunities for local employment A Project procurement plan will be developed that considers the engagement of local businesses to provide services to the Project. In line with the Australian Industry Participation Policy, the Project procurement plan will consider advertising work packages on the Industry Capability Network Gateway. Services, equipment and material required for the Project are considered typical for construction projects in the region and therefore are likely to be locally available.	Department of Agriculture and Fisheries DTMR Rockhampton Regional Council (RRC) Livingstone Shire Council (LSC) QFES	(General impacts) Section 8.9 Socio-economics

Value	Mitigation	Agency responsible[1]	Reference
	Pavement impact assessments will be undertaken as applicable (for example Third Street and Atkinson Road, amongst others) along with road safety audits and dilapidation surveys to inform discussion and negotiation with the DTMR, RRC and LSC with regard to upgrades and maintenance of state controlled and local roads in the local and regional Project areas. As a minimum, road condition and access will be maintained at pre-construction conditions. Site specific traffic management plans will be developed for the Project in consultation with DTMR, RRC and LSC. A detailed road use management plan will be developed in accordance with DTMR, RRC and LSC guidelines and policies and will include consideration of: • Reduced and enforced speed limits and improved signage • Fatigue management measures • Time restrictions for traffic operations, with limited night time activities (as far as is practicable) • Measures to reduce Project-related road traffic, such as bussing workers to and from site daily • Emergency and incident response measures • Transport routes in relation to abnormal (wide dimension or heavy) loads • Use of unsealed roads and use of roads during wet weather • Road maintenance, reinstatement and rehabilitation • Notification and updates to stakeholders in the local study area regarding traffic movements, particularly during commissioning and decommissioning.		
Great Barrier Reef World Heritage Area	Further to undertaking in-stream works during drier periods and sequencing works to account for periods of high flows and rainfall events, construction impacts will be managed through development and implementation of a construction environmental management plan, inclusive of erosion and sediment controls and will as a minimum include the following: • Significant ground disturbing activities are scheduled to be undertaken during drier periods reducing the potential for erosion and sediment laden runoff entering the watercourse • Installation of diversions and erosion controls such as sediment basins will direct clean water away from construction areas and allow site affected water to settle prior to re-entering the river • Wastewater from all sources will be stored, treated and tested prior to release to the environment • Clearing of vegetation for site facilities and access will be restricted to minimum areas required to undertake the works reducing the extent of exposure of soil to erosion influences	DoE	Chapter 9 (World Heritage properties and National Heritage places) Section 9.2 World Heritage

Value	Mitigation	Agency responsible[1]	Reference
	• Storage and use of potentially contaminating and polluting materials such as hydrocarbons, service and refuelling areas will be restricted to defined and protected (bunded) areas • Storage and handling of contaminants will comply with relevant guidelines and Australian standards.		
Great Barrier Reef National Heritage Place	Further to undertaking in-stream works during drier periods and sequencing works to account for periods of high flows and rainfall events, construction impacts will be managed through development and implementation of a construction environmental management plan, inclusive of erosion and sediment controls and will as a minimum include the following: • Significant ground disturbing activities are scheduled to be undertaken during drier periods reducing the potential for erosion and sediment laden runoff entering the watercourse • Installation of diversions and erosion controls such as sediment basins will direct clean water away from construction areas and allow site affected water to settle prior to re-entering the river • Wastewater from all sources will be stored, treated and tested prior to release to the environment • Clearing of vegetation for site facilities and access will be restricted to minimum areas required to undertake the works reducing the extent of exposure of soil to erosion influences • Storage and use of potentially contaminating and polluting materials such as hydrocarbons, service and refuelling areas will be restricted to defined and protected (bunded) areas • Storage and handling of contaminants will comply with relevant guidelines and Australian standards.	DoE	Chapter 9 (World Heritage properties and National Heritage places) Section 9.3 National Heritage
Squatter pigeon	The following measures would be implemented to mitigated [potential impacts to the squatter pigeon: • Enforcing on-site speed limits • Educating employees regarding the potential presence of squatter pigeon (southern) • Fauna spotters present during clearing activities • Clearly demarcate no-go areas of highly sensitive vegetation, including all vegetation not to be cleared • Sequential clearing of vegetation, to allow resident fauna the opportunity to disperse away from the immediate construction area • All general waste to be appropriately stored and covered and disposed of offsite at regular intervals • Undertake feral animal control through the use of baits and traps (as necessary and appropriate) in accordance with existing local and regional programmes. These mitigation and management measures are incorporated into the EMPs developed for the Project as	DEHP	Chapter 10 (Threatened species and ecological communities) Section 10.5.3.1 Squatter pigeon (southern)

Value	Mitigation	Agency responsible[1]	Reference
	discussed in Chapter 23 EMP.		
Fitzroy river turtle	A species management program (SMP) for the Fitzroy River turtle has been developed and will be implemented. The SMP considers threat abatement and recovery actions as appropriate and describes measures to be implemented to avoid, and if this is not possible, minimise the potential impacts of the Project on the species. The SMP will be implemented together with the Project EMPs (Chapter 23) and provides a framework for the management of the species throughout the life of the Project. Specific actions include: • The structural components of the weirs and associated works are designed (concept/preliminary design level) to minimise risks of turtle injury and mortality. • Include a specifically designed (concept level) turtle way (turtle ramp) at each weir. • A turtle movement study will be implemented on commencement of a Project trigger to improve current knowledge of Fitzroy River turtle movement patterns, home range and seasonal variations through monitoring and tracking. The study would be implemented through a university research program (or similar approach with qualified experts in the field) in collaboration with DEHP. The study would further inform the requirements of turtle passage and will facilitate quantifiable performance criteria to measure the effectiveness of the passage once operational.	DEHP	Chapter 10 (Threatened species and ecological communities) Section 10.5.3.3 Fitzroy river turtle