connectionsproject

Third Reedy Lake Bypass Project, Victoria (2016/7760)

GMW-CP EMP Addendum

This is an Addendum to GMW Connections Project Environmental Management Plan (EMP). This Addendum relates to Condition 1 of the decision made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* dated 4 July 2018 for the Third Reedy Lake Bypass Project.

The Third Reedy Lake Bypass Project refers to the construction of a bypass channel and associated infrastructure around Third Reedy Lake, within the Kerang wetlands, Victoria, to reinstate a more natural watering regime. An assessment report (DELWP, 2018) under the *EPBC Act 1999* Bilateral (Assessment) Agreement was undertake by the Victorian Department of Environment, Land, Water and Planning (DELWP) and submitted to the Commonwealth Department of Environment and Energy (DEE) on 18th February 2018. The project was determined a Controlled Action under the *EPBC Act 1999* (see EPBC Act referral 2016/7760). Approval to undertake the action was granted on 4 July 2018. Approval is subject to a number of conditions. Approval condition 1 requires that:

- To minimise adverse impacts to the Kerang Lakes Ramsar Site, the approval holder must ensure that the construction environmental management plan for the proposed action:
 - Includes a commitment to implementation of measures to identify any matters
 of national environmental significance that were not identified in the
 Environment Report must be reported to the Department within 14 days of
 their identification.
 - ii. Includes contingency measures to minimise impacts to matters of national environmental significance identified within the project area during construction and, when the contingency measures are implemented, evaluate and report their effectiveness to the Department within three months of implementation.
 - iii. Include a commitment to implementation of weed management measures in accordance with best practice techniques.
 - iv. The approval holder must provide the Department an electronic copy of the draft construction environmental management plan for comment prior to t seeking approval of the plan from the relevant state authority.
 - v. Is provided to the Department within 14 days following approval by the relevant state authority.

Assessment of the potential impacts of the proposed action was undertaken via the preparation of an Environmental Report (Jacobs, 2017 #3658)¹, which amongst other things identified potential Matters of National Environmental Significance (MNES), the associated risks and benefits of the proposed action on these MNES and proposed mitigation measures to manage

¹ Publicly available at https://www.planning.vic.gov.au/__data/assets/pdf_file/0014/110138/Third-Reedy-Lake-Bypass-Project-Goulburn-Murray-Water-Connections-Project,-Environmental-Report.pdf

risks. The Environmental Report also details around the construction process associated with the Project.

Environmental impacts associated with the construction phase of Third Reedy Lake Bypass Project are related to damage to plants and animals that occur within the construction footprint of the proposed bypass channel, new regulating structures and associated areas required for access, laydown etc.

The construction activities associated with the Third Reedy Lake Bypass Project will be management under the GMW Connections Project EMP. The EMP sets out the processes, procedures and guidelines to ensure that GMW Connections Project's construction activities are delivered in compliance to relevant state and Commonwealth legislation. The EMP details the planning and construction environmental management requirements to be applied to all capital works and on-farm works undertaken by the GMW Connections Project and its Contractor(s).

The EMP requires the development of a Site Environmental Control Map (SECM) which will identify areas requiring protection and will detail any site specific environmental or cultural heritage controls. A SECM will include as relevant:

- Site layout including approximate dimensions of the construction footprint;
- 'Exclusion areas' i.e. native fauna habitat, MNES or indigenous native vegetation requiring protection; any cultural heritage sensitivity areas (or as defined in a CHMP);
- Any indigenous native vegetation / trees approved for removal (including exotic or nonindigenous trees);
- Any other specific measures to protect or to mitigate potential impacts on matters of MNES in or near the works area;
- Any declared weed / disease / acid sulfate soil areas (refer to desktop assessment information):
- Site access;
- Any laydown or silt disposal areas;
- Any wash / clean down or refuelling areas; and
- Any council or VicRoads road reserve or Crown Land areas (marked up with any relevant items above).

In addition to the general construction environmental management requirements outlined in the GMW Connections Project EMP, specific measures to identity any MNES, contingency measures to minimise the impacts to MNES and weed management measures are required to comply with Condition 1 of the decision made under sections 130(1) and 133 of the *EPBC Act* 1999 for the Third Reedy Lake Bypass Project. These include:

Condition	Response to conditions
Commitment to implementation of measures to identify any MNES that	A number of field investigations have been undertaken to understand the project environment, in particular the presence of EPBC Act 1999 listed species and the wetland
were not identified in the Environment Report	dependent flora and fauna values at Third Reedy Lake.

	 Details of these investigations are provided in the Environmental Report. GMW to engage a consultant to undertake a survey of the Third Reedy Lake Bypass Project construction footprint prior to construction to verify that the results of the original fauna and vegetation surveys conducted by Biosis (2013) and Rakali Consulting (2013) remain true. Any newly discovered MNES within the project area will be reported to the Department of Environment and Energy (DOEE) within 14 days of identification. If new MNES are found, the contingency measures in the following table and Attachment 1 will be implemented where appropriate.
Contingency measures to minimise impacts to MNES identified within the project area	 The Environmental Report details the likelihood of MNES to occur in the project areas, which was supported by a large number of field assessments. Specific mitigation measures and contingency actions to minimise the impacts to MNES are provided in the table below and in further detailed in Attachment 1 (Appendix H of the Environmental Report). The GMW Connections Project will provide a report, as required, on the effectiveness of the contingency measure to DOEE within three months.
Commitment to implementation of weed management measures in accordance with best practice techniques	 The Connections Project will manage weeds within the project area in accordance with section 3.4.3 of the GMW-CP EMP. Specific management of weeds at Third Reedy Lake, in accordance with best practice techniques, is provided in Attachment 1.

The specific contingency measures that will be implemented to minimise impacts to (previously known) MNES within the TRLBP area include: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1}{2} \right$

MNES	Requirement
Terrestrial Fauna	 Halt works in the vicinity of the animal(s) while they remain within the project area. Seek immediate advice from DELWP regarding options for relocation of animals to suitable habitat located outside project works area General management approach/ actions and options of implementing contingency actions are provided in Attachment 1
Arboreal Fauna & Birds	 Halt works in the vicinity of the animal(s) while they remain within the project area. Seek immediate advice from DELWP regarding options for relocation of animals to suitable habitat located outside project works area. Avoid any impacts on relevant tree(s) (even if the fauna depart of their own accord) until an appraisal of their habitat values has been completed. Consider options for modifying project design/works program to avoid impact on habitat if value is considered to be high General management approach/ actions and options of implementing contingency actions are provided in Attachment 1.
Bird Nests/Breeding	Halt works in the vicinity of the nest/animal(s) while they remain within the project area and seek advice from DELWP regarding susceptibility of species to disturbance and options to minimise any impact.

	General management approach/ actions and options of implementing contingency actions are provided in Attachment 1.
Flora	Halt works in the vicinity of the plant(s) and establish a no go zone until further investigation has been completed.
	 Search for other individuals of the species in potentially suitable parts of the project works area consult DELWP regarding the significance of the discovery in the context of the known population(s) of the species in the Kerang Lakes Ramsar Site and the broader Victorian context. Consult DELWP regarding options for relocation of individual plants into suitable habitat as close as practicable to the discovery site, or other appropriate salvage actions.
	 General management approach/ actions and options of implementing contingency actions are provided in Attachment 1.
Aquatic fauna	 Very low risk to aquatic fauna associated with construction works due to no earthworks in the lake and minimal earthworks in waterways. Unlikely to encounter aquatic fauna during works. Any presence of and death or harm to the Flathead galaxias, Murray hardyhead and Silver perch will be reported to the Department of Environment and Energy (DOEE) within 14 days of identification.
	 Specific management and contingency actions in relation to sediment and erosion control are provided in Attachment 1.

Attachment 1 provides a full list of mitigation measures required to be implemented by the Construction Contractor to avoid and minimise the impacts to potential MNES within the project area. Alternative measures to achieve the same objectives may be used by the contractor, however any alternative measures will be required to be approved by GMW Connections Project.

The GMW Connections Project will ensure that all contactors working on the Third Reedy Lake Bypass Project undertake an induction on MNES prior to commencing works. The induction will cover MNES that have the potential to occur on site. The induction will also cover contingency measures should a MNES be identified.

References

Biosis (2013). "Kerang Lakes Fauna Assessment. Report for the North Central Catchment Management Authority and Goulburn-Murray Water."

DELWP (2018). Assessment Report under Bilateral (Assessment) Agreement – Third Reedy Lake Bypass Project, Goulburn Murray Water Connections Project (EPBC 2016/7760).

Rakali Consulting (2013). Ecological Vegetation Class Assessment for the Reedy Lake System, Little Lake Charm and Racecourse Lake and surrounding areas in the Kerang Wetlands Ramsar site. Report prepared for the North Central Catchment Management Authority and Goulburn-Murray Water.

Jacobs (2017). Third Reedy Lake Environmental Report. Report prepared for Goulburn-Murray Water.

Attachment 1: Tools or techniques for mitigating the potential environmental risks associated with construction (consistent with mitigation actions in EMP, included for ease of cross reference)

Mitigation Action	Timing	Responsibility
Management of flora and fauna		
 Protection of native vegetation: Construction footprint, including lay down areas and amenities are to be defined and clearly identified in Site Environmental Control Map (SECM). All activities to be contained to the designated construction footprint. Vehicle access should be limited to existing access tracks, where possible, and other designated areas. Site access points and access tracks are to be located to avoid any impact to remnant vegetation and significant trees Vegetation in road reserves should be protected as far as practicable, even in treeless areas and will require a Road Reserve Permit prior to any work in road reserves Erect high visibility fencing around native vegetation prior to commencement of construction works and maintained throughout the project. Areas of native vegetation in the vicinity of the work sites are identified in the SECM 	Pre- construction and during construction	Contractor
 Protection of trees: Use hand digging methods where the use of mechanical excavators may cause damage to trees, above or below ground, and at such other locations as may be reasonably requested by GMW or Contractor Trees which have been identified as significant are to be identified and protected to prevent accidental damage. Tree protection zones are to be established. Any tree limbs that must be trimmed to allow for equipment movement or construction works should be undertaken by a suitably qualified arborist Reinstate all habitat such as dead standing trees and fallen timber 	Pre- construction and during construction	Contractor
 Protection of native fauna: Appropriate construction methodology is to be developed in order to minimise open excavations2 or trench periods Contractors shall not handle any fauna at all, but should contact an appropriately trained wildlife specialist to attend the work site and carry out the capture and removal protocols provided by GMW Appropriately trained wildlife specialist to be on call throughout the project timeframe All site personnel shall be site inducted in the protocols for when an animal is detected. 	During construction	Contractor
Overnight management of excavations for native fauna: Where possible any open excavations are to be covered Where excavations remain open overnight, a thorough search for the presence of native fauna shall be conducted each morning (within the first 3 hours after sunrise and prior to the commencement of construction) Should construction and inspections cease for a period of 24 hrs or more and excavations remain open, sloped fauna exit points shall be provided no steeper than 2:1	During construction	Contractor
Protection of aquatic flora and fauna: Construction footprint to be defined and clearly identified on SECM. All activities to be contained to the designated construction work zone Ensure that all construction works comply with NCCMA guidelines and are undertaken in accordance with relevant Works On Waterways permit	During construction	Contractor
Management of weeds, pests and diseases		·

² An excavation will be deemed as anything deeper than 0.3 m and greater than 0.25 m² in area.

Mitigation Action	Timing	Responsibility
 Veed management: Identify weeds in project footprint prior to works based on those known to occur in the project area. If weeds are disturbed / removed, appropriately bury weeds on site or at dispose of at a licensed receiving facility. Keep to designated access tracks and laydown areas. If contact with noxious weeds by any earthmoving plant, equipment and vehicles is unavoidable prior to entering the site, physical removal is required. Complete regular physical clean downs on all machinery i.e. shovel clean-down. Vehicle access should be limited to existing access tracks, where possible, and other designated areas, as identified on site plans Ensure rock and other materials used for construction purposes is free of soil, seed and plant material before being taken to the work sites and again before being taken from the work sites on completion of the project Minimise the movement of soil between work sites Practice vehicle hygiene to avoid spread of weeds especially following works in weed contaminated areas. Under the Catchment and Land Protection Act 1994 (Sect. 71) a person needs to ensure they maintain vehicle hygiene when moving any equipment or machinery onto or along a roadway. Transport of weeds or weed seeds is an offence Soil and spoil must be covered during transport where the load is not considered secure (at the discretion of the super intendent) and disposed of in an approved location. Approval from DELWP is required to dispose of noxious weeds capable of germinating, or to deposit on land noxious weeds or weed seeds, other than in landfill. Obtain soil and gravel from weed free sites. A DELWP permit is required to use soil, sand or gravel which could result in the transfer of noxious weeds Dispose of any weeds likely to set seed or re-shoot by burning on-site (subject to fire prevention) or at a designated dump site (cover during transport) 	During construction	Contractor
Pests and Disease Management: • Minimise the movement of soil between work sites • Soil and spoil must be covered during transport where the load is not considered secure (at the discretion of the super intendent) and disposed of in an approved location	During construction	Contractor
 Before starting works strip the topsoil Spoil to be placed in trucks where possible (entering the site by reversing along the nominated excavation footprint) and stockpiled at the agreed location Locate soil stockpiles on cleared areas, away from existing embankments, drainage lines, native vegetation, waterways or access roads. Where the stockpile is to be placed, remove weeds by scalping or spraying Do not mix weed free and weedy topsoil Install temporary sediment and erosion control measures appropriate for the work site such as sedimentation fences, diversion drains and sediment traps. Temporary erosion controls should remain in place until long-term erosion control methods are established and functioning (if necessary) Sediment and erosion control measures should be designed in accordance with GMW Connections Project EMP (including GMW Environmental Handbook) and EPA Publications: Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites (EPA Publication 480) and Construction Techniques for Sediment Pollution Control (EPA Publication 275) Conduct weekly inspections of all sediment and erosion control measures during construction and until reinstatement measures are established. Checks should occur immediately (i.e. within 24 hrs) after rain events exceeding 5 mm In all areas where soil is to be disturbed and reinstated, the topsoil should be scraped and stored separately to all other soil with a separation of no less than 1 m Excavated spoil to be reused where possible. Surplus spoil, imported fill and contaminated sediment to be stored and disposed of appropriately 	Pre- construction and during construction	Contractor
Surface water and groundwater protection: • Minimise the extent to which any soil disturbance occurs as part of site preparation activities and for the storage of plant, equipment and other materials. • Implement appropriate silt/sediment control measures to prevent input of materials into waterways, drainage lines and channels • Locate any stockpiles of topsoil and other excavated materials in locations where the potential for input of silt/ sediment into waterways, drainage lines and channels is minimised	During construction	Contractor

tigation Action	Timing	Responsibilit
Prevention methods including bunded areas for refuelling of machinery to reduce the risk of contaminants to surface water runoff To minimise soil disturbance and erosion, ensure that all construction works comply with EPA publications; Environmental Guidelines for Major Construction Sites (EPA Publication 480) and Construction Techniques for Sediment Pollution Control (EPA Publication 275) Construction methods for works on or near waterways will adhere to any approvals granted by North Central CMA for the project (i.e. works on waterways permit/s)		
Oundwater protection: Construction footprint will be to the minimum extent necessary and therefore there will be minimal groundwater inception and demand for dewatering operations. The period of construction will be short term and localised Develop contingency measures with minimal impact on the resource in the event of groundwater interception during construction In the unlikely event where groundwater seepage results in a significant volume of water, prepare a groundwater dewatering plan to document minimisation, reuse, monitoring and disposal options Prevention methods including bunded areas for refuelling of machinery to reduce the risk of contaminants to groundwater	During construction	Contractor
ater quality monitoring: Water quality monitoring is required to be undertaken during any construction works that have potential to impact water quality The Contractor must prepare a water quality monitoring program in accordance with ANZECC guidelines: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000 Guidelines) and/or State Environment Protection Policy (Waters of Victoria) and GMW EMS and procedures The water quality monitoring program will also adhere to any approval granted by North Central CMA for the project (i.e. works on waterways permit/s)	Pre- construction and during construction	Contractor
orks near waterways		
Pump stations and discharge infrastructure to be located as far as practicable from any levee or waterway embankment to minimise disturbance to the riparian zone Sediment control devices must not impede fish passage past the work site Construction methods for works near or in waterways will adhere to any approval granted by North Central CMA for the project (i.e. works on waterways permit/s)		
ontaminated soils		
The potential discovery of contaminated soils will be minimised through shallow excavation, trenching and directional drilling. Any contaminated soil detected will be appropriately managed and disposed of in line with Environment Protection (Industrial Waste Resource) Regulations 2009, EPA Industrial Waste Guidelines and other EPA guidelines Soil contaminated with asbestos and asbestos containing products will be appropriately managed and disposed of in accordance with GMW EMP and procedures (including P15 Asbestos and Asbestos Containing Products) The storage of plant, equipment and other materials should be limited to designated areas	During construction	Contractor
ust and air quality		
Minimise the extent of the work site required to be stripped at any one time Complete site stripping when potential for dust generation is low; if not viable, implement appropriate dust suppression measures Implement appropriate dust suppression measures such as applying water or crushed rocks as required; instigating speed limit for construction vehicles on unsealed roads. Reduce intensity of construction works if dust generation is becoming problematic Stockpile slopes should be no greater than 2:1, unless covered with geotextile or revegetated Implement appropriate measures to minimise visible emissions from vehicles and machinery, consistent with EPA publication: Environmental Guidelines for Major Construction Sites (EPA Publication 480)	During construction	Contractor

Mitigation Action	Timing	Responsibility
 Before work begins consult with affected landowners and/or occupiers to inform them of the project schedule and project contact details including 24-hour contact details Notify nearby residences of any planned and unavoidable out of hours works five days in advance Implement appropriate measures to minimise noise consistent with EPA publications; Noise Control Guidelines (EPA Publication 1254,) and Environmental Guidelines for Major Construction Sites (EPA Publication 480) All construction plant and equipment used on the works must, in addition to other requirements, be: fitted with properly maintained noise suppression devices in accordance with the manufacturer's recommendations be maintained in an efficient condition operated in a proper and efficient manner 	Pre- construction and during construction	Contractor
Heritage management		
Implement any conditions, recommendations and any contingency measures contained within the project Cultural Heritage Management Plan (to be developed when project is approved)	Pre- construction and during construction	Contractor
Waste management		
 A suitable waste collection and recycling system with appropriate signage shall be implemented to ensure adequate facilities are available on-site to minimise the amount of the waste being disposed to landfill and to prevent litter generation Any waste concrete is to removed and disposed of off-site. Litter inspections shall be conducted regularly and action taken to remove litter where identified Portable toilets shall be maintained by a specialised Contractor(s) to minimise leaks and spills to the environment Prescribed waste shall be removed from the construction site on a progressive basis and not allowed to stockpile unduly 	Pre- construction and during construction	Contractor
Storage and handling of chemicals and fuels		
 Storage of chemicals and fuels: Determine classification of materials and clearly label substances before bringing on site Maintain on site a register of hazardous materials used/stored on site, including Material Safety Data Sheets Any fuel, oil and chemicals on site shall be located away from waterway areas No bulk chemicals, fuels or oils are to be stored on site Storage on site of small quantities required for small tools and equipment is acceptable so long as it is contained within a mobile, aboveground spill containment unit Minimise the quantity of fuel and chemicals present on site at all times by only bringing materials specifically required on site Maintain bunds, and vandal prevention systems around any storage units to standards specified in the EPA publication: Bunding Guidelines (EPA Publication 347) Designated construction equipment wash down and refuelling areas should contain sufficient bunding and contamination control measures to prevent spills entering waterways Vehicles and equipment is to be checked daily to ensure there are no oil, fuel or other liquids leaking 	Pre- construction and during construction	Contractor
Refuelling:	Pre-	Contractor
 All personnel responsible for refuelling machinery on work sites are to be trained in the re-fuelling protocols and spill response procedures prior to commencing work on site Refuelling shall not take place within 30 m of a drainage line, waterway other sensitive area (where practical) The person responsible for refuelling shall be in direct control of the fuelling operation at all times. Under no circumstances is the refuelling allowed to occur unattended During refuelling a portable tray is to be used to prevent on-ground spill if there is no designated bunded refuelling area 	construction and during construction	S.I doto!

Mitigation Action	Timing	Responsibility
 Spill response: Induction materials to contain spill response information (location of spill kits & how to clean up spills) for all personnel Hydrocarbon spill kits are to be present on site at all times and easily accessible. Personnel are to be trained in the use of spill kits Immediately contain and clean up any fuel or chemical spills and report them to the contract supervisor at GMW (who is to report them to the land manager) All spills or leaks of fuels or chemicals are to be cleaned up and the site remediated to original condition 	Pre- construction and during construction	Contractor
 Hazardous waste material: Asbestos or other hazardous waste detected on site will be appropriately managed and disposed of in line with Environment Protection (Industrial Waste Resource) Regulations 2009, EPA Industrial Waste Guidelines and other EPA guidelines Asbestos and asbestos containing products will be appropriately managed and disposed of in accordance with GMW EMS and procedures (including P15 Asbestos and Asbestos Containing Products) 	Pre- construction and during construction	Contractor
Fire management		
 No fires shall be lit in the open Provide firefighting equipment, as required, to ensure the safety of people, property and the environment Obey fire restrictions. No cutting, welding, grinding or other activities likely to generate fires may be undertaken in the open on "total fire ban" days When there is a risk of fire being caused by "hot work" (such as welding) ensure that all personnel are adequately trained with regard to fire prevention, safety and basic firefighting skills. All such personnel and vehicles involved in such activities shall be adequately equipped with firefighting equipment and safety gear 	Pre- construction, during construction and post- construction	Contractor
Public safety and amenity		
Traffic Management: A Traffic Management Plan including but not limited to the following:	Pre- construction and during construction	Contractor
 Public management: Public prohibited from entering work sites, unless wearing suitable personal protection equipment and accompanied by a senior staff member. Appropriate signage to be erected at site offices 	Pre- construction,	Contractor

Mitigation Action	Timing	Responsibility
	during construction	
Public management:	Pre-	Contractor
 Before work begins consult with affected landowners and/or occupiers to inform them of the project schedule, project contact details, including out of hours contacts, access requirements, etc. 		
Site reinstatement		
Reinstate/rehabilitate disturbed areas as soon as possible	Pre-	Contractor
 Areas where vegetation has been removed from roads, Crown land, private land or otherwise disturbed will be top soiled in accordance with what existed prior to construction 	construction	
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	construction	