Molonglo 3 PRA

Phase of Development	Activity	Effects Without the application of mitigation or management measures	Category of Risk	Likelihood	Consequence	Risk Rating	Mitigation/Management Measures	Complexity, implementation risk	Residual		
									Likelihood	Consequence	Risk Rating
Design	**Design Development**	Development footprint exceeds approved Strategic Assessment Area (e.g. water supply infrastructure) resulting in potential non-compliance with EPBC Approval	Various	**L**	**D**	**H**	- confirm footprint and required services / infrastructure - gain EPBC Approval for any impacts outside the approved area if MNES are identified - establish no-go zones, site boundaries and fences (where required) prior to construction commencing to prevent unauthorised access into protected areas, particularly offsets, the river corridor and Kama NR	Moderate	**P**	**D**	**M**
		Design of surface drainage results in changes to hydrology and nutrient levels in river corridor and areas of retained MNES habitat	Ecological	**P**	**J**	**H**	- incorporate Water Sensitive Urban design (WSUD) principles and water quality considerations in drainage design - design stormwater system to ensure site runoff does not flow across protected areas of pink-tailed worm lizard habitat or native vegetation communities - treat stormwater prior to entering Molonglo River	Moderate	**U**	**J**	**M**
		Design of ecological buffer between Kama Nature Reserve and urban area not appropriate, and results in adverse impacts to the value of the conservation area	Ecological	**P**	**J**	**H**	- final urban edge of Molonglo 3 to be determined at EDP stage, in consultation with relevant Government agencies	Moderate	**U**	**J**	**M**
		Design of urban area results in loss of up to 17.6 hectares of habitat for pink-tailed worm-lizard	Ecological	**C**	**J**	**E**	- gain approval under EPBC Act for impacts to pink-tailed worm-lizard (complete) - gain approval under PD Act for impacts to pink-tailed worm-lizard (underway) - implement avoidance and mitigation measures specified in NES Plan *- compensate for unavoidable impacts through offsets identified by the NES Plan*	Moderate	**C**	**J**	**E**
		Design of urban area results in loss of 2.6 hectares of box gum woodland	Ecological	**C**	**D**	**V**	- gain approval under EPBC Act for impacts to box gum woodland (complete) - gain approval under PD Act for impacts to box gum woodland (underway) - implement avoidance and mitigation measures specified in NES Plan *- compensate for unavoidable impacts through offsets identified by the NES Plan*	Moderate	**C**	**D**	**V**
		Design of urban area results in loss of habitat for woodland birds	Ecological	**L**	**D**	**H**	- implement avoidance and mitigation measures specified in NES Plan *- compensate for unavoidable impacts through offsets identified by the NES Plan*	Moderate	**L**	**D**	**H**
		Design of urban area results in loss of threatened flora species	Ecological	**P**	**D**	**M**	- minimise impact to potential habitats through avoidance of woodland offset areas identified by the NES Plan	Low	**P**	**F**	**L**
		Design of urban area results in the loss of >5 hectares of native vegetation	Ecological	**C**	**J**	**E**	- gain approval under PD Act for impacts to native vegetation (underway) - minimise clearing footprints in areas of native vegetation *- compensate for unavoidable impacts through offsets identified by the NES Plan*	Moderate	**C**	**D**	**V**
		Integration of heritage values of the Cultural Area into urban landscape not appropriate and results in adverse impacts to the value of the sites	Various	**P**	**J**	**H**	- consult with Heritage Unit regarding ongoing management of site and surrounding area - develop a conservation management plan and unanticipated discovery plan for implementation during construction - engage with RAO's if any impact likely to occur	Moderate	**U**	**J**	**M**
		Design of facilities and urban development adjacent to the river corridor and western edge results in adverse impacts to otherwise avoided or retained ecological values prescribed in the NES Plan	Ecological	**P**	**J**	**H**	- Masterplan to be considerate of ecological values in adjacent areas, including sympathetic adjacent land uses and adequate open space buffers	Moderate	**U**	**J**	**M**
		Management of Strategic Firefighting Advantage Zones (SFAZ) in Kama Nature Reserve is not appropriate for the ecological values present	Ecological	**L**	**D**	**H**	- implement the Kama Operation Plan for any bushfire or maintenance works required within the reserve - establish sensitive mowing regime to be undertaken outside the reserve to manage potential weed infestation	Moderate	**U**	**D**	**W**
		Location of urban edge requires substantial bushfire mitigation works outside of the Kama Nature Reserve, with potential impacts on conservation values	Ecological	**L**	**D**	**H**	- establish a (minimum) 60 metre inner asset protection zone - development to be designed in consultation with emergency services and land managers responsible for implementing post-construction obligations under the NES Plan and EDP stage - appropriate management regimes and bushfire asset protection zones to be established within and around urban area with consideration to conservation values in Kama NR	Moderate	**U**	**D**	**W**
		Opportunities for public transport and pedestrian access not fully realised in suburb design, resulting in car dependency and poor suburb functionality	Community	**U**	**J**	**M**	- implement recommendations made in the Study of Community, Sport and Recreation Facilities (GHD, 2014) based on their assigned priorities (short/medium/long term) - undertake community consultation to ensure community desires are incorporated into the design	Low	**U**	**D**	**W**

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		Loss of developable land and additional planning requirements from implementation of the NES Plan have financial implications on ACT Government	Financial	P	D	M	- ensure commitments made in NES Plan are understood prior to detailed design to minimise any non-compliances - ensure requirements under NES Plan are communicated to all contractors working on design and site investigation studies	Moderate	P	I	W
	Site Investigations	Uncontrolled access of vehicles and personnel during site investigations results in degradation of adjacent (unapproved) areas through soil compaction, weed introduction, vegetation removal etc. resulting in non-compliance with EPBC Approval	Ecological	P	D	M	- establish no-go zones for site investigation studies - inform all contractors of constraints associated with the site, and approval conditions which must be complied with - ensure contractors implement an environmental management plan for intrusive works on site	Low	U	D	W
		Subsurface conditions that may impact construction activities not identified and inappropriate design concepts developed as a result	Infrastructure/ Engineering	P	J	H	- incorporate recommendations of contamination and geotechncial assessments into project planning decisions	Moderate	U	J	M
		UXO investigations identify that significant remediation is required to make site safe	Infrastructure/ Engineering	P	J	H	- implement recommendations of assessment prior to construction commencing - include provision for remediation in project budget	Moderate	U	J	M
	Engineering inspections, service location and siting	Water infrastructure (e.g. ponds or water main) are located within areas avoided by the NES Plan, or outside the strategic assessment area, potentially resulting in additional impacts to MNES and non-compliance with EPBC Approval	Ecological	P	J	H	- consult with the C'wlth (DoEE) for any impacts (permanent or temporary) within areas protected by the NES Plan - gain EPBC Approval for any impacts outside the approved area if MNES are identified and seek approval under PD Act for any infrastructure outside of this scope	Moderate	P	D	M
		Odour and visual impacts from the sewer vents result in amenity impacts, potential reduction in value of some residential areas, and health concerns	Various	P	D	M	- minimise visual impacts of sewer vents during design, in particular, height of vents - incorporate best practice odour mitigation practices into design and construction of sewer vents	Low	U	D	W
		Existing road network does not have capacity to service new development	Infrastructure/ Engineering	P	J	H	- undertake traffic planning studies early in design process to ensure capacity of roads to handle additional traffic - implement recommendations of studies prior to occupation of suburbs	Moderate	P	D	M
Approvals	**Approvals**	Delays in approval decisions result in financial implications for the ACT Government, and delays in the land release program	Service Delivery	L	D	H	- commence planning and approvals processes early - have realistic expectations of potential delays / length of time required for approvals - undertake due diligence studies prior to commencing approvals processes to minimise scoping document requirements	Low	P	D	M
		Approval process delays construction of critical road infrastructure and connections required to service Molonglo 1 and 2	Service Delivery	L	D	H	- consult with EPD during design development to ensure clear communication of project timeframes and needs - consider assessing critical roads separately if delays are expected	Low	P	D	M
		Construction of powerlines requires standalone Impact Track Assessment which results in time delays and additional project costs	Service Delivery	L	J	V	- undertake early consultation regarding environmental impact assessment requirements for the powerlines - include time and cost provisions in planning considerations - undertake constraints and impact analysis during design to fully understand impacts of alignment to support a S211 process	High	L	D	H
		Land acquisition process results in delays and community complaints	Service Delivery	L	D	H	- commence negotiations with landholders as soon as possible	Low	L	I	M
	Offset	Additional offsets may be determined to be required due to impacts outside the original approval area which are difficult to find and/or cause delays for development	Various	P	D	M	- determine whether additional MNES would be impacted by works - prepare an EPBC Referral if required - identify suitable offset and commence process if determined to be required	Low	U	D	W