

Australian Capital Territory

# Planning and Development (Deep Creek Corridor Regional Water Quality Pond - Blocks 12 and 46 Molonglo Valley) Scoping Document 2020

Notifiable instrument NI2020–22

made under the

Planning and Development Act 2007, section 212 (Scoping of EIS)

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## 1 Name of instrument

This instrument is the *Planning and Development (Deep Creek Corridor Regional Water Quality Pond - Blocks 12 and 46 Molonglo Valley) Scoping Document 2020*.

## 2 Commencement

This instrument commences on the day after its notification day.

## 3 Scoping of EIS

Under section 212 of the *Planning and Development Act 2007* (the Act), the planning and land authority has prepared the scoping document in the schedule.

Brett Phillips  
Delegate of planning and land authority  
13 January 2020



**ACT**  
Government

Environment, Planning and  
Sustainable Development

## Scoping Document

Under Division 8.2.2 of the *Planning and Development Act 2007*

<b>APPLICATION NUMBER:</b> 201900045		<b>DATE OF THIS NOTICE:</b> 14 January 2020	
<b>DATE LODGED:</b> 25 November 2019			
<b>PROJECT:</b> Construction and operation of a regional water quality pond in the Deep Creek Corridor, Whitlam.			
<b>IMPACT TRACK TRIGGER:</b> <i>Planning and Development Act 2007</i> , Schedule 4 Part 4.2 Item 3 and Part 4.3 Items 1, 2b, 3 and 4			
BLOCK:	SECTION:	DISTRICT/DIVISION:	LESSEE/LAND CUSTODIAN
12	0	MOLONGLO VALLEY	EPSDD - Suburban Land Agency
46	0	MOLONGLO VALLEY	EPSDD - Suburban Land Agency EPSDD - Parks and Conservation
<b>PROPONENT:</b> Infrastructure, Finance and Capital Works, ACT Government			
<b>APPLICANT:</b> GHD Pty Ltd			

### SCOPING DOCUMENT

The planning and land authority (the Authority) within the Environment, Planning and Sustainable Development Directorate (EPSDD) received your application under s 212(1) of the *Planning and Development Act 2007* (the PD Act) for Scoping of an Environmental Impact Statement (EIS) for the above proposed development. Pursuant to s 212(2) of the PD Act, the Authority has:

- Identified the matters that are to be addressed by an EIS in relation to the development proposal; and
- Prepared a written notice (the *scoping document*) of the matters.

*NB: The EIS must conform to the requirements of this scoping document. This document does not indicate approval or support in any way, nor does it indicate approval in principle.*

### TERM OF SCOPING DOCUMENT

Pursuant to s 213(2) of the PD Act, the proponent must give the draft EIS to the Authority by the end of the period of 18 months starting on the day the Authority gives the scoping document for the development proposal to the applicant.

### FORM AND FORMAT OF EIS

The Authority requires that the proponent engage a suitably qualified independent consultant to prepare an EIS, OR the proponent submits, with the draft EIS, an independent review of the draft EIS undertaken by a suitably qualified consultant. The EIS must be in the following form and format:

- The EIS must be prepared in accordance with s 50 of the *Planning and Development Regulation 2008*.

GPO BOX 1908, Canberra ACT 2601

[www.planning.act.gov.au](http://www.planning.act.gov.au)

Authorised by the ACT Parliamentary Counsel—also accessible at [www.legislation.act.gov.au](http://www.legislation.act.gov.au)



**ACT**  
Government

**Environment, Planning and  
Sustainable Development**

## Scoping Document

Under Division 8.2.2 of the *Planning and Development Act 2007*

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- The EIS must be written in plain English and avoid the use of jargon as much as possible.
- The EIS is required to be provided in the same structure as described in this scoping document as closely as possible (e.g. executive summary, introduction, proposal details, legislative context, risk assessment, assessment of impacts, consultation, recommendations/mitigation, conclusion).
- A table that cross-references the EIS to the scoping document must be included in the EIS submission.
- The EIS must reference any figures or supporting information such as appendices and page numbers, tables and figures.
- Additional technical detail, including relevant data, technical reports and other sources of the EIS analysis must be provided in appendices.
- A redacted version (in addition to the full version) of any reports containing restricted or sensitive information must be provided for public notification, such as a Cultural Heritage Assessment report.
- Maps, diagrams and other illustrative material should be included in the EIS to assist readers to interpret information.
- The EIS document sized A4 with maps and drawings in A4 or A3 format.
- The proponent must supply a copy of all draft EIS and revised EIS documents in electronic formats for circulation and web posting. These are to be supplied by email, USB, or another agreed method. Digital files must not exceed 20 MB each.
- The proponent must supply three hard copies of the draft EIS and two copies on individual USB's once it has been accepted for lodgement and three hard copies and three copies on individual USB's of the revised EIS once it has been accepted for lodgement.

### COST OF PREPARATION OF EIS

The proponent is responsible for the preparation of the draft and revised EIS and any related applications and associated costs. This includes additional copies of the draft and revised EIS and other associated documents as required by the Authority from time to time.

### NEXT STEPS

The proponent is required to prepare a document (a **draft EIS**) that addresses each matter raised in the scoping document for the proposal within the timeframe provided in this scoping document. Once the draft EIS has been accepted for lodgement, a public notification fee is payable in order for notification, referrals and assessment to commence. After the notification period has closed, the Authority will provide comments and any public representations received for the proponent to address in preparing a **revised EIS**, and any further instructions on the application.

**Delegate**

Brett Phillips  
Executive Group Manager  
Planning Delivery Division  
Environment, Planning and  
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**Contact**

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## GENERAL REQUIREMENTS FOR THE EIS

### 1. Cover Page

The cover page must clearly display the following:

- The name of the proposal (project title)
- The block identifier(s) and street address for the proposal
- The date of the preparation of the document
- Full name and postal address of the designated proponent
- Full name and postal address of the designated applicant
- Name and contact details of the person/organisation who prepared the documents (if different to the above)

### 2. Glossary

Provide a glossary of technical terms, acronyms and abbreviations used in the EIS.

### 3. Executive Summary

Provide a non-technical summary of the EIS including a description of the proposal, key findings and recommendations.

### 4. Introduction

Summarise the proposal background and justification for the proposal.

### 5. Proposal Details

#### 5.1. Project Description

Provide a description of the proposal, including:

- a) The objectives and justification for the proposal;
- b) The location of the land to which the proposal relates, including detailed maps;
- c) The division and/or district names and block and/or section numbers of the land under the *Districts Act 2002*;
- d) If the land is leased – the lessee’s name;
- e) If the land is unleased or public land – the custodian of the land;
- f) The purposes for which the land may be used;
- g) A clear identification of all lands subject to direct disturbance from the proposal and associated infrastructure and geomorphic features such as waterways and wetlands. This is to be supported by a map showing all affected lands;
- h) An outline of any developments that have been, or are being, undertaken by the proponent, or other person(s) or entities, within the proposal area and broadly in the region. Describe how the proposal relates to these developments;
- i) A description of all the components of the proposal, including the proposal specifications (such as materials, overall height, overall width, surface area and dam capacity), the predicted timeline for implementation (design, approvals, construction, operation,

decommissioning and future expansion) and project life;

- j) A plan/description of the precise location of any works to be undertaken, structures to be built or elements of the proposal that may have relevant impacts; and
- k) A description of the construction and maintenance methodologies for the proposal.

## 5.2. Alternatives to the proposal

Provide details of any alternatives to the proposal considered in developing the proposal including a description of:

- a) Any design and location (any site within the ACT or other jurisdictions) alternatives to the proposal and provide reasons for selecting the preferred option with an analysis of site selection;
- b) The criteria used for assessing the performance of any alternative to the proposal considered;
- c) Any matters considered to avoid or reduce potential impacts prior to the selection of the preferred option; and
- d) Details of the consequences of not proceeding with the proposal.

## 6. Legislative and Strategic Context

A description of the EIS process including any statutory approvals obtained or required for the proposal, and how the proposal is aligned with strategic priorities for the ACT.

### 6.1. Statutory requirements

The EIS must include information on the following statutory requirements:

- *Environment Protection and Biodiversity Conservation Act 1999*
- *Planning and Development Act 2007*
- *Planning and Development Regulation 2008*
- *Utilities (Technical Regulation) Act 2014*
- *Environment Protection Act 1997*
- *Environment Protection Regulation 2005*
- *Nature Conservation Act 2014*
- *Tree Protection Act 2005*
- Other related statutory approvals

### 6.2. Climate change

The EIS must include information on how the proposal will reduce the risks from climate change impacts and include proposed adaptation measures to reduce vulnerability and increase resilience of the community and the Territory, particularly in relation to extreme events such as heatwaves, droughts, storms with flash flooding and bushfires. The information must address impacts on the local microclimate and how it will avoid contribution to urban heat and positively contribute to urban cooling measures.

Additionally, the EIS must address the contribution the proposal will make to reducing greenhouse gas emissions and meeting the legislated target for a net zero emissions Territory (by 2045 at the latest).

Preparation of the EIS must consider relevant sections of the ACT Government's following policies:

- ACT Climate Change Strategy 2019-25, and
- Canberra's Living Infrastructure Plan: Cooling the City (2019)

### 6.3. Other requirements

The description must also include information on how each of the following has been considered in the preparation of the EIS and the development of the proposal:

- Territory Plan 2008
- ACT Planning Strategy
- National Capital Plan
- ACT Dam Safety Code 2018 ([DI2018-202](#))
- Relevant Environment Protection Policies and Separation Distance Guidelines for Air Emissions ([https://www.environment.act.gov.au/environment/legislation\\_and\\_policies](https://www.environment.act.gov.au/environment/legislation_and_policies))
- Molonglo Valley Strategic Assessment ([https://www.planning.act.gov.au/planning-our-city/planning-studies/molonglo-valley/molonglo\\_valley\\_strategic\\_assessment](https://www.planning.act.gov.au/planning-our-city/planning-studies/molonglo-valley/molonglo_valley_strategic_assessment))
- Molonglo Stage 3 – Urban Development and Infrastructure EIS Exemption
- Contaminated Sites Environment Protection Policy 2017
- Plans of Management for any public land
- Any relevant Master Plan
- Other relevant planning and environmental guidelines, action plans and management plans.

#### 6.3.1. Ecologically sustainable development (ESD)

Provide a description of the proposed action in relation to the long-term and short-term considerations of economic development, social development and environmental protection. The proponent should ensure that the EIS adequately addresses the principles of sustainable development as defined by s 9 of the PD Act, especially the economic consequences of the environmental impacts from the proposed development.

#### 6.3.2. Territory Plan strategic directions

A statement must be provided regarding the proposal's consistency with the principles in the Statement of Strategic Directions in the Territory Plan 2008 (Section 2.1 - Strategic Direction).

## 7. Risk Assessment

### 7.1. Risk Assessment Methodology

Provide a risk assessment in accordance with the Australian and New Zealand Standard for risk management AS/NZS ISO 31000:2009 *Risk Management – Principles and guidelines*. The proposed criteria for determining which risks are potentially significant impacts must be described.

The Preliminary Risk Assessment (PRA) submitted as part of the request for a scoping document must be revised to include, but not be limited to, the risks identified by the Authority in Table 1.

#### -Assessment guide-

Provide a table with the headings below to describe the risks identified and the original risk rating without any mitigation strategies in place. This table format is one option, however alternative formats can be used provided the methodology is clearly described and in accordance with AS/NZS ISO 31000:2009 *Risk Management – Principles and guidelines*

Risk	Likelihood	Consequence	Risk rating
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The risks identified in Table 1 are based on the scoping document application and comments received from entities on the application. All of these risks are considered potentially significant (i.e. a medium risk level or above) and must be addressed in the EIS. Should any risk levels change during the preparation of the EIS or any new risks become apparent, these must be assessed and included with a justification in the EIS, and where relevant, the residual risk assessment.

**Table 1 – Identified impacts and requirements to be addressed in the EIS**

Environmental Theme	Risk identified	See section/s below for further detail
Planning and Land Status	<ul style="list-style-type: none"> <li>Impact on existing and potential adjacent land uses, including offset areas and the Molonglo River Reserve.</li> </ul>	8.2.1
	<ul style="list-style-type: none"> <li>Compliance of the proposal with the NUZ4 River Corridor zone objectives.</li> </ul>	
Traffic and Transport	<ul style="list-style-type: none"> <li>Increased traffic congestion and reduced road safety during construction.</li> </ul>	8.2.2
Utilities	<ul style="list-style-type: none"> <li>Impacts to existing and proposed infrastructure during construction.</li> </ul>	8.2.3
Materials and Waste	<ul style="list-style-type: none"> <li>Increased waste to landfill during construction, demolition and operation.</li> </ul>	8.2.4
	<ul style="list-style-type: none"> <li>Impacts from storage of contaminated soils and waste during construction.</li> </ul>	
Soils and Geology	<ul style="list-style-type: none"> <li>Spread of soil contamination due to construction activities.</li> </ul>	8.2.5
	<ul style="list-style-type: none"> <li>The risk of unexploded ordinance in the project area.</li> </ul>	
	<ul style="list-style-type: none"> <li>Potential for increased run-off (sediment and erosion) during large rainfall events, during and post construction.</li> </ul>	
Water Quality and Hydrology	<ul style="list-style-type: none"> <li>Impact on water quality downstream in the Molonglo River and Murrumbidgee River during construction and operation.</li> </ul>	8.2.6
	<ul style="list-style-type: none"> <li>Accumulation of pollutants in the dam, contributing to poor dam water quality and blue green algae blooms.</li> </ul>	
	<ul style="list-style-type: none"> <li>The accumulation and concentrated release of nutrients contributing to blue green algae blooms downstream.</li> </ul>	



Environmental Theme	Risk identified	See section/s below for further detail
	<ul style="list-style-type: none"> <li>Potential for groundwater contamination post-construction.</li> </ul>	
Climate Change and Air Quality	<ul style="list-style-type: none"> <li>Emissions from construction traffic and equipment, including dust production and greenhouse gas emissions.</li> </ul>	8.2.7
	<ul style="list-style-type: none"> <li>Increases in the frequency and intensity of extreme climatic events result in the breach/failure of infrastructure.</li> </ul>	
	<ul style="list-style-type: none"> <li>Impacts to flows in the Molonglo River in periods of sustained drought.</li> </ul>	
Socio-economic and Health	<ul style="list-style-type: none"> <li>Risk of odour impacting existing and future nearby land uses, including but not limited to residential areas.</li> </ul>	8.2.8
	<ul style="list-style-type: none"> <li>Health risk associated with blue green algae blooms in the dam and downstream.</li> </ul>	
	<ul style="list-style-type: none"> <li>Impact on recreational use of Molonglo River.</li> </ul>	
	<ul style="list-style-type: none"> <li>Risk of the dam emitting an unpleasant odour or harbouring disease carrying pests, such as mosquitoes.</li> </ul>	
Noise	<ul style="list-style-type: none"> <li>Noise impacts on the amenity of sensitive receivers during construction and operation.</li> </ul>	8.2.9
Landscape and visual	<ul style="list-style-type: none"> <li>Visual impacts of the dam on future residents and recreational users of the Molonglo River.</li> </ul>	8.2.10
Hazard and Risk	<ul style="list-style-type: none"> <li>Catastrophic infrastructure failure impacting the river and human safety.</li> </ul>	8.2.11
	<ul style="list-style-type: none"> <li>Risk of bushfire during construction</li> </ul>	
	<ul style="list-style-type: none"> <li>Increased flooding and drowning risk to future residents</li> </ul>	
Ecology and Natural Environment	<ul style="list-style-type: none"> <li>Destruction and fragmentation of terrestrial species and their habitat.</li> </ul>	8.2.12
	<ul style="list-style-type: none"> <li>Impact of the works on the broader Molonglo River Reserve.</li> </ul>	
	<ul style="list-style-type: none"> <li>Decreased water quality and nutrient composition as well as flow changes impacting on aquatic habitat and species downstream.</li> </ul>	
	<ul style="list-style-type: none"> <li>Impacts on threatened species during construction and operation of the dam.</li> </ul>	
	<ul style="list-style-type: none"> <li>The risk of vehicles spreading weeds and impacting on habitat during construction.</li> </ul>	
Heritage	<ul style="list-style-type: none"> <li>Impacts on heritage places and objects.</li> </ul>	8.2.13



## 8. Assessment of Impacts

Sufficient information is required to provide the Authority with an adequate understanding of the environmental impacts associated with the proposal.

Each potentially significant risk identified in Table 1 and in the proponent's PRA must be addressed, and structured, as set out in sections 8.1.1-8.1.5 below.

### 8.1. Standard requirements

#### *8.1.1. Environmental conditions and values*

Describe the environmental conditions and values for the environmental themes identified in Table 1. This section should discuss the baseline conditions for the area.

#### *8.1.2. Investigations*

Identify the findings and results of any environmental investigation in relation to the land to which the proposal relates.

#### *8.1.3. Impacts*

Describe the environmental impacts associated with the construction and operation for the environmental themes identified in Table 1 and in the proponent's risk assessment (including cumulative, consequential and indirect effects) on physical and ecological systems and human communities. Particular emphasis should be placed on the potentially significant impacts identified in the risk assessment. Include a discussion of the timeframes of impacts i.e. short or long term, their nature and extent and whether they are reversible or irreversible, unknown or unpredictable. Include an analysis of the significance of the relevant impacts. Information must include any technical data and other information used or needed to make a detailed assessment of the impacts.

#### *8.1.4. Mitigation*

Discuss the proposed safeguards and mitigation measures that will be implemented to reduce the potentially significant impacts identified in Table 1 and the proponent's risk assessment. This is to include:

- a) A description and an assessment of the proposed impact avoidance, mitigation or offsetting measures to deal with the environmental impact of the proposal, along with which stage the mitigation measures will be adopted
- b) Any statutory or policy basis for the mitigation measures
- c) An outline of an environmental management plan (EMP) that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing
- d) The frequency, duration and objectives of monitoring proposed
- e) The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program
- f) Any corrective actions should the mitigation measures fail
- g) A description of the cost effectiveness of environmental mitigation or rehabilitation measures proposed and the expected or predicted effectiveness of those measures.

### 8.1.5. Residual risk

Provide a table that details the residual risk for potentially significant impacts identified in Table 1 and the proponent's risk assessment. A residual risk assessment is only required where the significance of impact is determined as medium or above. The calculation of the residual risk should take into account the implementation of mitigation or offsetting measures. A discussion of how the calculations were determined should also be included, including the expected or predicted effectiveness of the mitigation measures.

-Assessment Guide-				
Provide the residual risk assessment as set out in the table below.				
Risk identified in Section 7	Original risk rating from items identified in 7	Residual likelihood	Residual consequence	Residual risk rating

## 8.2. Detailed requirements

The following matters relate to Table 1 and must be addressed in detail in the EIS. Please note this is not an exhaustive list of matters that may be required to accurately detail the assessment scenarios.

### 8.2.1. Planning and Land Status

- Include a description of the planning context of the area where the proposed development will be located.
- Describe how the project relates to the development of Whitlam Estate.
- Describe the land use of the proposed site and any site to be affected (including, but not limited to, zoning, lessee(s) or custodian of the land, the permissibility of the proposed use defined in the Territory Plan).
- Describe the planning and development status of any land or project relevant to the proposal, including but not limited to the Molonglo Valley Plan for the Protection of Matters of National Environmental Significance (NES Plan), EIS exemption application for the Molonglo Valley Stage 3 Urban Development and the adjacent estate development plan development applications.
- Describe how the proposed development is consistent with the NES Plan.
- Outline how the proposal is consistent with the Territory Plan, including but not limited to the NUZ4 River Corridor Zone objectives and the Water Sensitive Urban Design General Code (including the provisions to be adopted in draft Territory Plan Variation 354).
- Describe draft Territory Plan Variation 360 and the implications this has on the Molonglo River Reserve, the project site and the proposed development and outline how the proposal is consistent with the variation.

### 8.2.2. Traffic and Transport

- Describe arrangements for the transport of construction materials, equipment, products, and personnel during the construction phase of the development proposal.
- Investigate vehicular routes to transport oversized equipment and accessories by heavy vehicles, the associated impacts and measures to mitigate these impacts.
- Provide a Construction Management Plan addressing volume of traffic generated by the development, road capacity, road widths, cycleways and overall road function in Whitlam.

- Provide a Transport Impact Assessment investigating the traffic impacts the proposal will have during and after construction, considering the impacts to both the roads in Whitlam and to the greater network.
- Consider the risks associated with civil works in Whitlam being delayed or not complete and provide measures to mitigate this risk.

#### *8.2.3. Utilities and Infrastructure*

- Describe the existing utilities located on the land subject to this proposal and relevant utilities proposed as part of the future civil works in Whitlam.
- Describe any new utilities, removal or realignments required as a result of this development or the neighbouring estate that may impact this development.
- Investigate potential impacts to existing and/or proposed infrastructure during and after construction and provide mitigation measures to reduce the impacts.

#### *8.2.4. Materials and Waste*

- Provide details on the types and quantity of construction waste and contaminants on site and how these will be treated, stored and disposed of.
- Discuss the risks associated with the storage of waste and materials on site, including the risk of contaminants and weeds spreading and measures to mitigate these.
- Describe any hazardous chemicals proposed to be used on the site during and after construction.

#### *8.2.5. Soils and Geology*

- Describe the soil and geology features of the area.
- Discuss any contamination that is present at the site, and how the site will be remediated, if required.
- Respond to and reflect the findings of the contaminated sites environmental audit undertaken of the subject site, including the management requirements of the audit, the EPA's letter of endorsement of the audit and any other mitigation measures.
- Discuss the risks associated with unexploded ordnances (UXOs) and any measures to mitigate this risk including remediation prior to construction.
- Prepare an unexpected finds protocol to be implemented during construction.
- Describe the risks associated with sedimentation and erosion from construction and operation activities, especially during extreme weather, and measures to reduce the impacts.
- Provide information on measures to limit soils from degrading over time.

#### *8.2.6. Water Quality and Hydrology*

- Provide an analysis of the existing water catchment detailing flow volumes, rates and water quality.
- Consider the impact the proposal will have on the hydrology downstream of the dam wall. Appropriate mitigation measures are required to manage water flow discharging directly from the dam into the Molonglo River.
- Discuss the risk and potential causes of poor-quality water being released from the dam and the downstream consequences and measures to mitigate these.

- Consider the short-term and long-term risks associated with the accumulation of pollution entering the dam and ways to mitigate this. Consider both in-dam and upstream pollution treatment methods.
- Provide detailed water quality modelling covering the lifespan of the dam and the suburb. This should consider the risks of poor water quality for both the community and downstream ecological values.
- Discuss the role the dam will play in controlling sedimentation from entering the Molonglo River during construction of the suburb. The construction timeline of both this proposal and the stages in the estate should be considered.
- Consider the risk of the accumulation of nutrients contributing to blue green algae blooms and its impact to water quality both in the dam and downstream.
- Outline what ongoing upstream, in-dam and downstream water quality monitoring will be established and how this will inform water quality improvement activities.
- Describe the risk of sediments and contaminants entering the waterways during construction and how this will be appropriately mitigated.
- Identify measures to mitigate potential groundwater contamination post-construction.

#### *8.2.7. Climate Change and Air Quality*

- Consider the risks associated with more frequent severe weather events, such as heavy rainfall, drought, flooding and bushfire and the impacts these may have on the proposed development and the broader catchment.
- Discuss the air quality impacts associated with dust produced during construction and how this will be mitigated.

#### *8.2.8. Socio-economic and Health*

- Describe the socio-economic and health risks associated with blue green algae blooms upstream, in the dam and downstream of the proposed dam wall and relevant mitigation measures.
- Describe the socio-economic and health risks associated with the spread of contaminants during construction and measures to mitigate these.
- Explore the health risks associated with increased mosquito populations being attracted by the proposed development. This should consider the potential spread of vector borne illnesses.
- Describe the impacts the proposal will have on recreational use of the area, including impacts to the water flow and to aquatic species commonly fished in the Molonglo River.
- Describe the risk of the dam emitting an unpleasant odour and the impact this would have on the future adjacent sensitive receivers and any design, ecological or other methods that may mitigate this risk.

#### *8.2.9. Noise, vibration and lighting*

- Identify any potentially sensitive receivers which may be affected by noise, vibration and light generated during and after construction. Consideration should be given to existing and future residents, flora, fauna, etc.
- Detail mitigation measures to limit noise, vibration and lighting impacts.

8.2.10. *Landscape and visual*

- Describe the visual and aesthetic impacts of the proposal to future residential areas and to recreational users of the area, including the Molonglo River Reserve and any mitigation measures.

8.2.11. *Hazard and Risk*

- Identify the risk of a catastrophic infrastructure failure, including breaches in the dam wall during or post construction and what methods are being implemented to mitigate these.
- Provide an assessment of the potential hazard and risk associated with construction activities and the operation of the project including contamination, fire, flooding, workplace accidents and damage to utilities and other infrastructure.
- Provide a response against the ACT Bushfire Management Standards. Consideration is required as to the impacts the proposal will have on any identified environmentally sensitive areas which could potentially result in inconsistencies with land management.
- Provide an assessment of the potential threat of flooding, utilising higher exceedance probabilities and recurrence intervals to reflect climate change, the critical nature of the infrastructure and proximity to future residential areas.
- Explore the drowning risks and any mitigation measures, particularly considering the proposals proximity to future residential areas.

8.2.12. *Ecology and natural environment*

- Provide a description of the ecological values (including native vegetation and endangered ecological communities) and threatened aquatic and terrestrial species and their habitat located on and adjacent to the site, including both up and down-stream.
- Clearly identify the location of Pink-tailed Worm-lizard (PTWL) habitat within and adjacent to the site. All maps should use the Biosis (2016) mapping as this is the agreed mapping to be used for values and calculations in the Molonglo Valley Strategic Assessment.
- Discuss the impact associated with displacing, removing and fragmenting PTWL habitat and any mitigation measures to reduce this impact, including exploring the possibility of avoiding or minimising destruction of PTWL habitat above the level of the dam wall.
- Describe the nature and extent of construction works and their impacts proposed to be undertaken within the Molonglo River Reserve.
- Provide an assessment of the potential impacts on aquatic habitat and species (including, but not limited to Murray Cod and Murray River Crayfish) in the Molonglo and Murrumbidgee rivers and mitigation measures proposed to reduce the impacts.
- Discuss the downstream ecological and water quality impacts associated with poor-quality water leaving the development during and post construction and blue green algae blooms. The impacts to Deep Creek, the Molonglo and Murrumbidgee Rivers should all be considered.
- Discuss the risk of weed dispersion from construction activities, including earthworks and vehicle movements through and around the site and measures to mitigate this impact.



#### 8.2.13. Heritage

- Discuss the heritage significance of the area and the potential for Aboriginal places and objects to occur in all contexts within the Molonglo Valley. Reference should be made to recent heritage studies, where appropriate.
- Provide an Unanticipated Finds Protocol for the management of any heritage finds encountered during construction.

### 8.3 Entity requirements

The EIS must address the entities comments provide in Attachment A. If the issues raised by entities have been addressed in other sections of the EIS, this must be cross referenced.

## 9. Community and stakeholder consultation

### 9.1. Consultation must be undertaken with:

- Lease holders and land managers of land potentially impacted by the proposal such as adjacent businesses and residents;
- Any recreational groups which may be affected by the proposal;
- Any volunteer conservation, landscape management or land care groups active in the area who may be affected by the proposal; and
- The local community and community groups, for example the ACT and Region Catchment Management Coordination Group and Molonglo Catchment Group.

### 9.2. Consultation methods

- Describe the community consultation undertaken (methodology and criteria for identifying stakeholders and the communication methods used).
- Provide details on the information provided during the community consultation process. A plain English statement explaining the proposal and conceptual drawings must be made available to the community and stakeholders.
- Consultation should occur as early as possible and avoid, or make allowances for public holidays, school holidays and the summer holiday (Christmas) shutdown period.

### 9.3. Consideration of community feedback

- Provide a summary of how the community and stakeholders responded to the proposal and the main comments raised.
- Describe how any concerns have been considered and identify any changes that have been made to the proposal.

### 9.4. Consideration of public representations from Draft EIS notification

- The revised EIS must include the representations received, issues raised in the representations and a response to the issues and values identified. The summary response must clearly identify the representation(s) to which the responses relate.

## 10. Recommendations

Provide a summary of commitments to avoid, mitigate and offset the potential significant impacts associated with the proposal.

Describe the monitoring parameters, monitoring points, frequency, data interpretation and reporting proposals.

## **11. Other relevant information**

The proponent may wish to include issues outside the scope of the EIS as a separate section of the EIS. This allows the proponent to identify matters not required to be addressed in the EIS, but that would be subject to development assessment consideration and notification. This can provide additional context for members of the public regarding management of environmental issues, by ensuring that the public is aware that these issues will be addressed in the detailed design of the proposal.

## **12. References**

A reference list using standard referencing systems must be included.

## **13. Required Appendices**

### **13.1. Scoping document for the EIS**

A copy of the final scoping document should be included in the EIS. Where it is intended to bind appendices in a separate volume from the main body of the EIS, the final scoping document should be bound with the main body of the EIS for ease of cross-referencing.

### **13.2. Scoping Document Reference**

Include a table that cross-references the EIS to the scoping document. If the EIS addresses the scoping document in multiple places then this must be also referenced.

### **13.3. Proponent's Environmental History**

Provide details of any proceedings under a Commonwealth or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- The person proposing to take the action
- For an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, then provide details of the corporation's environmental policy and planning framework.

### **13.4. Information Sources**

For information given the following must be stated:

- The author or any reports or studies
- The publication date
- The source of the information
- How recent the information is (i.e. when a study was conducted or when primary sources were produced)
- How the reliability of the information was tested
- What uncertainties (if any) are in the information

### **13.5. Study team**

The qualifications and experience of the study team and specialist sub-consultants and expert reviewers must be provided.



**13.6. Specialist studies**

All reports generated based on specialist studies undertaken as part of the EIS are to be included as appendices.

**13.7. Research**

Any proposals for researching alternative environmental management strategies or for obtaining any further necessary information should be outlined in an appendix.

## GLOSSARY

**Controlled Action (EPBC):** An action defined under the EPBC Act, s 67.

**Development application (DA):** Application for development as defined under the PD Act.

**Environment:** As defined under the *Planning and Development Act 2007* (the PD Act), each of the following is part of the environment:

- (a) the soil, atmosphere, water and other parts of the earth;
- (b) organic and inorganic matter;
- (c) living organisms;
- (d) structures, and areas, that are manufactured or modified;
- (e) ecosystems and parts of ecosystems, including people and communities;
- (f) qualities and characteristics of areas that contribute to their biological diversity, ecological integrity, scientific value, heritage value and amenity;
- (g) interactions and interdependencies within and between the things mentioned in paragraphs (a) to (f);
- (h) social, aesthetic, cultural and economic characteristics that affect, or are affected by, the things mentioned in paragraphs (a) to (f).

**Environmental Impact Statement (EIS):** As defined under the PD Act.

**EPBC Act:** *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

**Impact Track:** An assessment track that applies to a development proposal defined under the PD Act, s 123.

**Long term:** Greater than 15 years duration.

**Medium term:** Greater than three (3) years to 15 years duration.

**PD Act:** *Planning and Development Act 2007* (ACT)

**Regulated waste:** waste defined under the *Environment Protection Act 1997*

**Scoping:** The process of identifying the matters that are to be addressed by an EIS in relation to the development proposal - see the PD Act, s 212 (2).

**Short term:** Zero to three (3) years duration.

**Socio-economic:** Involving both social and economic factors.

## ATTACHMENT A -- ENTITY COMMENTS

### ACT Health

The Health Protection Service (HPS) has reviewed the documents and supports:

- the need for assessment and remediation of all areas not included in the geographical survey and remediation of unexploded ordnance by Milsearch in 2015, prior to the commencement of any construction activities; and
- the need for Construction Environmental Management Plans, as well as Unexpected Finds Protocols, to be developed and implemented for the various construction activities and phases.

The HPS recommends that inflows into the dam are managed to mitigate against the potential for Blue Green Algae blooms.

### Conservator of flora and fauna

Overall, the EIS documentation will be required to identify the full suite of risks associated with this dam. There are several major concerns which have been identified and are required to be included in the Scoping Document and addressed in the EIS process. In particular, the EIS will need to consider impacts to threatened species and the risk and impacts of poor water quality on downstream values. The EIS needs to address the following:

#### 1. Impacts to the reserve

- The proponent should confirm that the correct reserve boundary alignment is being used. PCS can provide a boundary file if required.
- The area of construction and any impacts from construction are to be outside of the Molonglo River Reserve. Some of the provided plans show some impact to the reserve. In particular, site compound and any temporary basins cannot be located in the reserve.
- Access along the Molonglo Valley Interceptor Sewer is to remain open at all times during construction for emergency, fire management and land management activities.
- Figure 3-4 indicates that approximately 1 ha within the River Corridor is proposed to be cleared. This contradicts Section 4.5.5 which states that no vegetation clearing is expected within the reserve. The proponent should clarify the nature and extent of impacts within the reserve.

#### 2. Impacts to terrestrial biodiversity

As identified in the Scoping Document the Molonglo river corridor supports an important population of *Aprasia parapulchella* (Pink-tailed Worm-Lizard (PTWL)). The proponent must ensure that:

- All EIS documents are required to use 2016 Biosis mapping for lizard habitat areas, as this is the agreed mapping to be used for NES Plan values and calculations; and
- The possibility of avoiding or minimising destruction of PTWL habitat above the level of the dam wall must be thoroughly investigated and documented within the EIS.

#### 3. Impacts to aquatic biodiversity

The EIS documentation is required to identify the full suite of risks to aquatic values in the Molonglo and Murrumbidgee Rivers. In particular, the EIS needs to address threatened aquatic species listed and protected under the Nature Conservation Act 2014 and/or the Environment Protection and Biodiversity Conservation Act 1999, including, but not limited to:

- Murray Cod (*Maccullochella peelii*)
- Murray River Crayfish (*Euastacus armatus*)

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*The EIS should also consider structural fish habitat within the dam to encourage establishment of fish species.*

#### 4. Water quality and downstream impacts

- *The risk associated with poor water quality leaving the development postconstruction is required to be characterised.*
- *The efficacy of mitigation through design is currently over-stated and is required to be adequately addressed.*
- *Most impacts are identified in the construction footprint of the dam itself, and not the downstream values. Downstream impacts in the Molonglo River and Murrumbidgee River are required to be included and addressed.*
- *Consideration needs to be given to the change of hydrology below the dam and appropriate treatment to manage waterflow to the river. The proponent may want to consider rock armouring, potential for wetland area (if appropriate in this location/ fits with values) or some other kind of treatment.*
- *Detailed water quality modelling covering the life-span of the suburb and dam are required to establish the likely water quality impacts of this dam both for the community and downstream values. This analysis should consider:*
  - *the accumulation of pollution entering the dam,*
  - *the internal processes leading to their release, and consequences from poor water quality leaving the dam, and*
  - *consequences of blue green algae blooms on the values held by the community.**This could inform further works to identify options for mitigating future poor water quality.*
- *Ongoing water quality monitoring both upstream within and downstream of the dam, (including within the Molonglo River) should be established and/or maintained. In-dam monitoring needs to be of sufficient resolution to identify changes in water quality, and the internal processes contributing to changes in water quality. This information would be essential to informing water quality improvement activities.*
- *The MUSIC model provided indicates that approximately 70% of catchment pollution will be 'treated' by the dam. The EIS process should thoroughly address mitigation activities that could improve the likely outcomes for the dam, such as:*
  - *Reducing the development area;*
  - *Increasing the proportion of WSUD infrastructure in the catchment upstream of the dam;*
  - *Implementing multiple, smaller ponds that are less than 2m in depth which would limit the likelihood of creating anoxic conditions.*
- *P. 19, 4.1.1. – this section needs to acknowledge that the dam plays a fundamental role in mitigating pollution over the life of the suburb, not just during the construction phase. As such, impacts and mitigation strategies need to consider long-term impacts in addition to short term impacts.*
- *P. 19, 4.1.2 – one of the key aims of the dam is to protect the Molonglo River during construction, and it is not clear that this is being met. Note: In order to meet this aim, the dam should have been built prior to construction/earthworks for the suburb.*
- *P. 23, 4.4 – The following should be incorporated into the Scope of Works for each construction stage:*
  - *"Maintain the operation of existing water quality monitoring equipment in Deep Creek, and water quality monitoring in the Molonglo River downstream of Deep Creek."*
- *P. 23, 4.4 – The following should be incorporated into the Scope of Works for the Post-construction stage:*

- 
- *“Detailed water quality monitoring of the dam at a resolution sufficient to identify trends and water quality processes occurring in the dam.”*

### **Environment Protection Authority (EPA)**

*The scoping document application does not reflect the findings of the contaminated sites environmental audit of the area subject to the EIS nor the management requirements under the audit and the EPA's letter of endorsement of the audit.*

*The scoping document must be updated to reflect the above and be resubmitted for review prior to the EPA making comment on the EIS.*

### **ACT Emergency Services Agency**

*ACTF&R makes the following comments:*

*The identified indicative site area (Figure 1.1) would be managed as an Inner Asset Protection Zone as per the ACT Bushfire Management Standards. Consideration is required as to the impact this would have on any identified environmentally sensitive areas which could potentially result in inconsistencies with land management.*

### **ACT Heritage Council**

*The Whitlam Estate area has been subject to previous heritage investigations as part of the land release process, with recent studies undertaken by Biosis (2013), CHMA (2018) and CHMA (2019); all in consultation with Representative Aboriginal Organisations.*

*These studies did not identify any Aboriginal places or objects in the immediate vicinity of the proposed water storage dam; and all other Aboriginal places identified within the Whitlam Estate have been salvaged in accordance with Heritage Act 2004 approvals.*

*On this basis, no further heritage assessment is required for the EIS for the proposed water storage dam.*

*However, the EIS should acknowledge that Aboriginal places and objects can occur in all contexts within the Molonglo Valley, and should include an ‘Unanticipated Finds Protocol’ for the management of any heritage finds encountered during construction.*

### **Transport Canberra and City Services Directorate**

*Please include the items below in the EIS:*

- *A Construction Management Plan addressing road capacity, widths, cycleways and overall road function in Whitlam should be provided.*
- *A Transport Impact Assessment for the construction of the Deep Creek Water Quality Pond on Whitlam suburb roads and the greater network should also be provided.*
- *Detail design of the dam must be carried out in consultation with TCCS.*

### **National Capital Authority (NCA)**

*The NCA's interest in this project is for the land use to be consistent with the National Capital Plan (the Plan). Section 3.2 of the Plan identifies the area of the proposed dam as a ‘river corridor’ in the General Policy Plan – Metropolitan Canberra. The proposed development in the Scoping Document is not inconsistent with the permitted land uses of river corridors in the Plan.*

### Jemena

*On behalf of Evoenergy Gas, Jemena have reviewed the REFERRAL-EIS-201900045-Deep Creek Water Storage Dam and have no comment to make.*

### ICON Water

*Icon Water has reviewed the proposal from an environmental and civil engineering perspective and haven't come up with anything which would be an issue for Icon Water asset within the area of Deep Creek Water Storage Dam. Below are some general notes from Icon Water Departments:*

#### *Environment & Sustainability:*

- *The area has potential for contamination but the works are to be undertaken consistently with an Unexpected Finds Protocol and shouldn't impact on Icon Water.*
  - *The area has potential for heavy metal contamination to be present.*
  - *The area has potential for unexploded ordinance (UXO) to be present. Proposed pond site cleared of UXO during site investigation stage according to report.*
- *The risk assessment in the document has accounted for a failure of the dam causing a "catastrophic" event with regards to the MVIS, this would be both from an operational perspective with potential damage to the environment. Mitigation measures were that the dam would be constructed as per High Consequence Dam guidelines. The risk assessment states:*
  - *"The pond has been designed considering the NSW Dam Safety Committee requirements for a High C dam, including spillway, earthquake, erosion and instrumentation considerations including the reinforcement of foundations for at risk columns. See 45". Clarify the reference to 45.*

#### *Principle Civil Engineer:*

- *This is to confirm that we are satisfied with the measures taken to mitigate the impact of discharges from the dam on the stability of the sewer bridge downstream of the dam structure (ref item 16 in the environmental risk register).*
- *We agree that the effect of these measures should ensure that the risk is kept to an acceptable level which will not be materially different to that applying at present without the dam.*