



Environmental Protection Authority

EPA REFERRAL
FORM

Referral of a Proposal to the Environmental Protection Authority under Section 38 of the *Environmental Protection Act 1986*.

PURPOSE OF THIS FORM

Section 38 of the *Environmental Protection Act 1986* (EP Act) makes provision for the referral to the Environmental Protection Authority (EPA) of a proposal (significant proposals, strategic proposals and proposals under an assessed scheme) by a proponent, a decision making authority (DMA), or any other person.

The purpose of this form is to ensure that EPA has sufficient information about a proposal to make a decision about the nature of the proposal and whether or not the proposal should be assessed under Part IV of the EP Act. Information provided in the referral form must be brief (no more than 30 pages), sharp and succinct to achieve the purposes of this form.

This form does not prevent the referrer from providing a supplementary referral report. Should a referrer choose to submit a supplementary referral report please ensure the following.

- i. Information is short, sharp and succinct.
- ii. Attachments are below eight megabytes (8 MB) as they will be published on the EPA's website (exemptions apply) for public comment. To minimise file size, "flatten" maps and optimise pdf files.
- iii. Cross-references are provided in the referral form to the appropriate section/s in the supplementary referral report.

This form is to be used for all proposals¹ which can be referred to the EPA under section 38 of the EP Act; i.e. referrals from: **proponents** of proposals (significant proposals, strategic proposals, derived proposals, proposals under an assessed scheme); **DMAs** (significant proposals); and **third parties** (significant proposals).

This form is divided into several sections, including; Referral requirements and Declaration; Part A - Information of the proposal and proponent; and Part B Environmental Factors. Guidance on successfully completing this form is provided throughout the form and is also available in the EPA's *Environmental Assessment Guideline for Referral of a Proposal under s38 of the EP Act (EAG 16)*.

Send completed forms to

Office of the Environmental Protection Authority
Locked Bag 10, East Perth WA 6892

or

Email: Registrar@epa.wa.gov.au

Enquiries

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Locked Bag 10, East Perth WA 6892

Telephone: 6145 0800

Fax: 6145 0895

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¹ Please note that this form consolidates and replaces the following forms: *Referral of a Proposal by the Proponent to the EPA under section 38(1) of the EP Act*; *Referral of a Proposal by a third party to the EPA under section 38(1) of the EP Act*; and *Referral of a development proposal to the EPA by the decision making authority*.

Referral requirements and Declaration

The following section outlines the referral information required from a proponent, decision making authority and third party.

(a) Proponents

Proponents are expected to complete all sections of the form and provide GIS spatial data to enable the EPA to consider the referral. Spatial GIS data is necessary to inform the EPA's decision.

The EPA expects that a proponent will address Part B of the form as thoroughly as possible to demonstrate whether or not the EPA's objectives for environmental factors can be met.

If insufficient information is provided the EPA will request more information and processing of the referral will commence once the information is provided or the EPA decides to make a precautionary determination on the available information.

Proponent to complete before submitting form	
Completed all the questions in Part A (essential)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed all the questions in Part B	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed all other applicable questions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Included Attachment 1 – any additional document(s) the proponent wishes to provide	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Included Attachment 2 – confidential information (if applicable)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping but clearly separating any confidential information	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed the Declaration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
What is the type of proposal being referred? <i>* a referred proposal seeking to be declared a derived proposal</i>	<input checked="" type="checkbox"/> significant <input type="checkbox"/> strategic <input type="checkbox"/> derived* <input type="checkbox"/> under an assessed scheme
Do you consider the proposal requires formal environmental impact assessment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, what level of assessment? <i>API = Assessment of Proponent Information</i> <i>PER = Public Environmental Review</i>	<input type="checkbox"/> API Category A <input type="checkbox"/> API Category B <input type="checkbox"/> PER

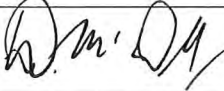
NB: The EPA may apply an Assessment on Proponent Information (API) level of assessment when the proponent has provided sufficient information about:

- the proposal;
- the proposed environmental impacts;
- the proposed management of the environmental impacts; and
- when the proposal is consistent with API criteria outlined in the [Environmental Impact Assessment \(Part IV Division 1 and 2\) Administrative Procedures 2012](#).

If an API A formal level of assessment is considered appropriate, please refer to Environmental Assessment Guideline No. 14 *Preparation for an Assessment on Proponent Information (Category A) Environmental Review Document EAG 14 (EAG14)*.

Declaration

I, DEANNE McDONALD....., (full name) declare that I am authorised on behalf of WATER CORPORATION..... (being the person responsible for the proposal) to submit this form and further declare that the information contained in this form is true and not misleading.

Signature				Name (print)	Deanne McDonald		
Position	General Manager, Assets Planning		Organisation	Water Corporation			
Email	Deanne.McDonald@watercorporation.com.au						
Address	629		Newcastle St				
	Leederville			WA	6902		
Date	3 November 2016						

(b) Decision-making authority

The EPA expects decision-making authorities to complete applicable sections of Part A of the form and provide the proponent an opportunity to provide additional information in Part B of the form where appropriate.

Wherever possible the DMA should obtain relevant spatial information from the proponent and provide this to the EPA with the referral.

DMA to complete before submitting form	
Completed all the questions in Part A (essential)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Provided Part B to the proponent for completion	<input type="checkbox"/> Yes <input type="checkbox"/> No
Completed all other applicable questions	<input type="checkbox"/> Yes <input type="checkbox"/> No
Included Attachment 1 – any supporting information	<input type="checkbox"/> Yes <input type="checkbox"/> No
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping	<input type="checkbox"/> Yes <input type="checkbox"/> No
Completed the below Declaration	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you consider the proposal requires formal environmental impact assessment?	<input type="checkbox"/> Yes <input type="checkbox"/> No
What is the type of proposal being referred?	<input type="checkbox"/> significant proposal <input type="checkbox"/> significant proposal under an assessed scheme

Declaration

I,, (*full name*) submit this referral to the EPA for consideration of the environmental significance of its impacts.

Signature		Name (print)	
Position		Organisation	
Email			
Address	Street No.	Street Name	
	Suburb	State	Postcode
Date			

(c) Third Party

Third parties are asked to have consideration for the Significance Test outlined in Part A Section 1.5 of this form before referring a significant proposal to the EPA. The EPA will only consider proposals that are likely, if implemented, to have a significant effect on the environment.

Third parties are to provide sufficient information to clearly identify the significant proposal, the proponent, and their reasons for referring the proposal. This can be done by completing as much of Part A of the form as possible, taking into consideration the information available. Third parties may wish to fill in Part B of the form to advance their own views of the significance of the environmental impacts and the need for EPA assessment.

In most cases the EPA will seek additional information from the proponent. This will be to confirm or amend the identity of the proponent, the proposal, and to allow the proponent opportunity to provide its views on the significance of the environmental impacts and the need for EPA assessment.

Third Party to complete before submitting form	
Complete all applicable questions in Part A and B	<input type="checkbox"/> Yes <input type="checkbox"/> No
Completed the Declaration	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you consider the proposal requires formal environmental impact assessment?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Declaration

I,, (*full name*) submit this referral to the EPA for consideration of the environmental significance of its impacts.

Signature		Name (print)		
Email				
Position		Organisation		
Address	Street No.	Street Name		
	Suburb	State	Postcode	
Date				

PART A: Information on the proposal and the proponent

All fields of Part A must be completed by the proponent and/or decision-making authority for this document to be processed as a referral. Third party referrers are only expected to fill in the fields they have information for.

1 PROPONENT AND PROPOSAL DESCRIPTION

1.1 The proponent of the proposal

Proponent and/or DMA to complete	
Name of the proponent	Water Corporation
Joint Venture parties (if applicable)	
Australian Company Number(s)	28 003 434 917
Postal Address <i>(Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State)</i>	PO Box 100 Leederville WA 6902
Key proponent contact for the proposal <i>Please include: name; physical address; phone; and email.</i>	Bree Atkinson 629 Newcastle St Leederville WA 6902 Bree.Atkinson@watercorporation.com.au
Consultant for the proposal (if applicable) <i>Please include: name; physical address; phone; and email.</i>	

1.2 Proposal

Proposal is defined under the EP Act to mean a “project, plan, programme policy, operation, undertaking or development or change of land use, or amendment of any of the foregoing, but does not include scheme”. Before completing this section please refer to [Environmental Protection Bulletin 17 – Strategic and derived proposals \(EPB 17\)](#) and [Environmental Assessment Guideline for Defining the Key Characteristics of a proposal \(EAG 1\)](#).

Proponent and/or DMA to complete	
Title of the proposal	Groundwater Replenishment Scheme (GWRS) Stage 2
What project phase is the proposal at?	<input type="checkbox"/> Scoping <input checked="" type="checkbox"/> Feasibility <input type="checkbox"/> Detailed design <input type="checkbox"/> Other _____
Proposal type <i>More than one proposal type can be identified, however for filtering purposes it is recommended that only the primary proposal type is identified.</i>	<input type="checkbox"/> Power/Energy Generation <input type="checkbox"/> Hydrocarbon Based – coal <input type="checkbox"/> Hydrocarbon Based – gas <input type="checkbox"/> Waste to energy <input type="checkbox"/> Renewable – wind <input type="checkbox"/> Renewable – wave <input type="checkbox"/> Renewable – solar <input type="checkbox"/> Renewable – geothermal

Proponent and/or DMA to complete

- Mineral / Resource Extraction**
 - Exploration – seismic
 - Exploration – geotechnical
 - Development

- Oil and Gas Development**
 - Exploration
 - Onshore – seismic
 - Onshore – geotechnical
 - Onshore – development
 - Offshore – seismic
 - Offshore – geotechnical
 - Offshore – development

- Industrial Development**
 - Processing
 - Manufacturing
 - Beneficiation

- Land Use and Development**
 - Residential – subdivision
 - Residential – development
 - Commercial – subdivision
 - Commercial – development
 - Industrial – subdivision
 - Industrial – development
 - Agricultural – subdivision
 - Agricultural – development
 - Tourism

- Linear Infrastructure**
 - Rail
 - Road
 - Power Transmission
 - Water Distribution
 - Gas Distribution
 - Pipelines

- Water Resource Development**
 - Desalination
 - Surface or Groundwater
 - Drainage
 - Pipelines
 - Managed Aquifer Recharge

- Marine Developments**
 - Port
 - Jetties
 - Marina
 - Canal
 - Aquaculture

Proponent and/or DMA to complete	
	<input type="checkbox"/> Dredging <i>If other, please state below:</i> <input type="checkbox"/> Other _____
Proponent and/or DMA to complete	
Description of the proposal – describe the key characteristics of the proposal in accordance with EAG 1 .	<p>Duplication of the existing Advanced Water Recycling Plant at the Beenyup facility and the construction of water recharge and conveyance infrastructure to recharge approximately 14 GL of recycled water to the Leederville and Yarragadee aquifers.</p> <p>This additional 14 GL per annum represents an expansion to the GWRS to approximately 28 GL per annum.</p>
Timeframe in which the proposal is to occur (including start and finish dates where applicable).	<p>Commencement of pipeline construction Q3 2017</p> <p>Start of aquifer recharge Q4 2018</p>
Details of any staging of the proposal.	No staging
What is the current land use on the property, and the extent (area in hectares) of the property?	<p>The land within the Development Envelope includes that zoned (under the Metropolitan Region Scheme) as:</p> <ul style="list-style-type: none"> • Public Purposes • Parks and Recreation • Public Purposes • Primary Regional Roads • Urban • Other Regional Roads • Rural. <p>The Development Envelope covers a total of 29.42 ha</p>
<p>Have pre-referral discussions taken place with the OEPA?</p> <p>If yes, please provide the case number. If a case number was not provided, please state the date of the meeting and names of attendees.</p>	<p>Yes</p> <ul style="list-style-type: none"> • 19 April 2016 (Hans Jacob, Kathryn Schell) • 27 June 2016 (Hans Jacob, Kathryn Schell) • 13 October 2016 (Hans Jacob, Kathryn Schell)
DMA (Responsible Authority) to complete	
<p>For a proposal under an assessed scheme (as defined in section 3 of the EP Act, applicable only to the proponent and DMA) provide details (in an attachment) as to whether:</p> <ul style="list-style-type: none"> • <i>The environmental issues raised by the proposal were assessed in any assessment of the assessed scheme.</i> 	

Proponent and/or DMA to complete	
<ul style="list-style-type: none"> <i>The proposal complies with the assessed scheme and any environmental conditions in the assessed scheme.</i> 	

1.3 Strategic / derived proposals

Complete this section if the proposal being referred is a strategic proposal or you are seeking the proposal to be declared a derived proposal. Note: Only a proponent may refer a strategic proposal and seek a proposal to be declared a derived proposal.

Proponent to complete	
Is this referred proposal a strategic proposal?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are you seeking that this proposal be declared a derived proposal?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If you are seeking that this proposal be declared a derived proposal, what is the Ministerial Statement number (MS #) of the associated strategic proposal?	MS #: _____

1.4 Location

Proponents and DMAs must provide spatial data. Please refer to [EAG 1](#) for more detail.

Proponent, DMA and Third Party to complete	
Name of the Local Government Authority in which the proposal is located.	City of Joondalup City of Wanneroo
Location: <ul style="list-style-type: none"> a) street address; lot number; suburb; and nearest road intersection; or b) if remote the nearest town; and distance and direction from that town to the proposal site. 	<ul style="list-style-type: none"> • AWRP – Lot number 8278 along Ocean Reef Road in Craigie • Southern recharge site – located on Lot 500 on Plan 64576 • Northern recharge site – located on Water Corporation (the Corporation) owned Lot 800 on Plan 52636 • Recharge pipeline – located between the Corporation's Beenyup site in Craigie along a 13 km route through the suburbs of Woodvale, Wanneroo, Ashby and Neerabup joining to the southern recharge site and the northern recharge site.
Have maps and figures been included with the referral (consistent with EAG 1 where appropriate)? <i>The types of maps and figures which need to be provided (depending on the nature of the proposal) include:</i> <ul style="list-style-type: none"> • maps showing the regional location and context of the proposal; and • figures illustrating the proposal elements. 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proponent and DMA to complete	
Have electronic copies of spatial data been included with the referral? NB: <i>Electronic spatial (GIS or CAD) data, geo-referenced and conforming to the following parameters:</i> <ul style="list-style-type: none"> • GIS: polygons representing all activities and named; • CAD: simple closed polygons representing all activities and named; • datum: GDA94; • projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA); • format: ESRI geodatabase or shapefile, MapInfo Interchange Format, Microstation or AutoCAD.. 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

1.5 Significance test and environmental factors

Proponent, DMA and Third Party to complete	
What are the likely significant environmental factors for this proposal?	<input type="checkbox"/> Benthic Communities and Habitat <input type="checkbox"/> Coastal Processes <input type="checkbox"/> Marine Environmental Quality <input type="checkbox"/> Marine Fauna <input checked="" type="checkbox"/> Flora and Vegetation <input type="checkbox"/> Landforms <input type="checkbox"/> Subterranean Fauna <input checked="" type="checkbox"/> Terrestrial Environmental Quality <input checked="" type="checkbox"/> Terrestrial Fauna <input checked="" type="checkbox"/> Hydrological Processes <input checked="" type="checkbox"/> Inland Waters Environmental Quality <input type="checkbox"/> Air Quality & Atmospheric Gases <input type="checkbox"/> Amenity <input checked="" type="checkbox"/> Heritage <input checked="" type="checkbox"/> Human Health <input type="checkbox"/> Offsets <input type="checkbox"/> Rehabilitation and Decommissioning
Having regard to the Significance Test (refer to Section 7 of the <i>EIA Administrative Procedures 2012</i>) in what ways do you consider the proposal may have a significant effect on the environment and warrant referral to the EPA?	<p><i>Please outline in two paragraphs or less.</i></p> <p>The proposal requires the clearing of native vegetation, representing black cockatoo foraging habitat (up to 2.15 ha).</p> <p>The proposal has the potential to alter surface and groundwater flows and quality.</p> <p>The proposed pipeline route passes through an Aboriginal Heritage Site and a European Heritage Site.</p>

1.6 Confidential information

All information will be made publically available unless authorised for exemption under the EP Act or subject to the Freedom of Information Act 1992.

Proponent to complete	
Does the proponent request that the EPA treat any part of the referral information as confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>Ensure all confidential information is provided in a separate attachment in hard copy.</i>	

2 REGULATORY CONSIDERATIONS

This section applies to the Local, State and Commonwealth regulatory considerations for the referred proposal.

2.1 Government approvals

2.1.1 State or Local Government approvals

DMA to complete	
What approval(s) is (are) required from you as a decision-making authority?	
Is rezoning of any land required before the proposal can be implemented? If yes, please provide details.	<input type="checkbox"/> Yes <input type="checkbox"/> No

2.1.2 Regulation of aspects of the proposal

Complete the following to the extent possible.

Proponent to complete	
Do you have legal access required for the implementation of all aspects of the proposal? <i>If yes, provide details of legal access authorisations / agreements / tenure.</i> <i>If no, what authorisations / agreements / tenure is required and from whom?</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Southern recharge site: Excision of portion of Reserve 21176 required (consultation with DPaW underway) Pipeline: Authorisation for pipeline easement from relevant stakeholders (CoJ, CoW, Main Roads WA, Public Transport Authority, land owners)

Outline both the existing approvals and approvals that will be / are being sought as a part of this proposal.

Proponent to complete			
Aspects* of the proposal	Type of approval	Legislation regulating this activity	Which State agency /entity regulate this activity?
Recharge bore drilling	Licence to Construct a Well	RIWI Act 1914 Health Act 1911	DoW
Aquifer recharge	Endorsement of aquifer risk assessment and process risk assessment	GWR Regulatory Framework	Inter-Agency Working Group (DoW, DoH)
Operation of AWRP	Licence amendment	EP Act 1986 – Part V	DER

Clearing (AWRP, pipeline)	Native Vegetation Clearing Permit	Environmental Protection (Clearing of Native Vegetation) Regulations 2004	DER
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**e.g. mining, processing, dredging*

2.1.3 Commonwealth Government *Environment Protection and Biodiversity Conservation Act 1999* approvals

Refer to the [assessment bilateral agreement](#) between the Commonwealth of Australia and the State of Western Australia for assistance on this section.

Proponent to complete	
1. Does the proposal involve an action that may be or is a controlled action under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If no continue to Part A section 2.1.4.</i>
2. What is the status of the decision on whether or not the action is a controlled action?	<input type="checkbox"/> Proposal not yet referred <input checked="" type="checkbox"/> Proposal referred, awaiting decision <input type="checkbox"/> Assessed – controlled action <input type="checkbox"/> Assessed – not a controlled action
3. If the action has been referred, when was it referred and what is the reference number (Ref #)?	Date: 28/09/2016 Ref #: 2016/7786
4. If the action has been assessed, provide the decision in an attachment. Has an attachment been provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. Do you request this proposal to be assessed under the bilateral agreement?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Complete the following to the extent possible for the Public Comment of EPBC Act referral documentation.

Proponent to complete	
6. Have you invited the public to comment on your referral documentation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7. How was the invitation published?	<input type="checkbox"/> newspaper <input type="checkbox"/> website
8. Did the invitation include all of the following?	
(a) brief description of the action	<input type="checkbox"/> Yes <input type="checkbox"/> No
(b) the name of the action	<input type="checkbox"/> Yes <input type="checkbox"/> No
(c) the name of the proponent	<input type="checkbox"/> Yes <input type="checkbox"/> No
(d) the location of the action	<input type="checkbox"/> Yes <input type="checkbox"/> No
(e) the matters of national environmental significance that will be or are likely to be significantly impacted	<input type="checkbox"/> Yes <input type="checkbox"/> No
(f) how the relevant documents may be obtained	<input type="checkbox"/> Yes <input type="checkbox"/> No

Proponent to complete	
(g) the deadline for public comments	<input type="checkbox"/> Yes <input type="checkbox"/> No
(h) available for public comment for 14 calendar days	<input type="checkbox"/> Yes <input type="checkbox"/> No
(i) the likely impacts on matters of national environmental significance	<input type="checkbox"/> Yes <input type="checkbox"/> No
(j) any feasible alternatives to the proposed action	<input type="checkbox"/> Yes <input type="checkbox"/> No
(k) possible mitigation measures	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. Were any submissions received during the public comment period?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Have public submissions been addressed? If yes provide attachment.	<input type="checkbox"/> Yes <input type="checkbox"/> No

2.1.4 Other Commonwealth Government Approvals

Proponent, DMA and Third Party to complete			
Is approval required from other Commonwealth Government/s for any part of the proposal?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<i>If yes, please complete the table below.</i>			
Agency / Authority	Approval required	Application lodged?	Agency / Local Authority contact(s) for proposal
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	

3. SUPPORTING INFORMATION

Please attach copies of any relevant information on the proposal, supporting evidence and / or existing environmental surveys, studies or monitoring information undertaken and list the documents below.

Proponent, DMA and Third Party to complete			
	<i>Title</i>	<i>Author</i>	<i>Document Description</i>
(1)	Water Corporation Beenyup Stage 1 Biological Survey	Ecologia Environment	Level 2 Flora and Vegetation Survey and a Level 1 Zoology Survey of the portion of the Beenyup wastewater treatment plant site nominated for development of the AWRP (Stage 1 and Stage 2)
(2)	Perth Groundwater Replenishment Scheme Stage 2: Flora and Fauna Survey Report	360 Environmental	Flora and fauna surveys of proposed pipeline route and recharge sites, including spring flora survey and black cockatoo habitat assessment
(3)	Black Cockatoo Habitat Assessment – Perth Groundwater Replenishment Scheme Stage 2	360 Environmental	Survey of black cockatoo foraging habitat and potential breeding trees surrounding the proposed southern recharge site
(4)	Groundwater Replenishment Scheme Stage 2: Subterranean Fauna Desktop Assessment	Bennelongia Environmental Consultants	Desktop assessment of the likelihood of occurrence, and risk of impacts to, stygofauna in the Leederville and Yarragadee aquifers in proximity to the proposed aquifer recharge locations
(5)	Groundwater Replenishment Scheme Stage 2: Aboriginal Heritage Survey	Horizon Heritage Management	Survey of the proposed Development Envelope for sites of aboriginal heritage significance

Proponent, DMA and Third Party to complete

	Report		
(6)	Perth Groundwater Replenishment Scheme Stage 2: Preliminary Risk Assessment Summary Report	Water Corporation	Identification and quantification of risks associated with the treatment of recycled water and aquifer recharge
(7)	Perth Groundwater Replenishment Scheme Stage 2: Environmental Values Report	Water Corporation	Identification of the environmental values to be protected during aquifer recharge.

PART B: ENVIRONMENTAL FACTORS

The purpose of Part B is to assist the EPA to determine the significance of the likely environmental impacts of the proposal in accordance with the EPA's *Environmental Assessment Guideline for Environmental factors and objectives* (EAG 8) and *Environmental Assessment Guideline for Application of a significant framework in the EIA process* (EAG 9). Referrers completing Part B should refer closely to EAG 8 and EAG 9.

The EPA has prepared [Referral of a Proposal under s38 of the EP Act EAG No.16 - Appendix A](#) (Appendix A) to assist in identifying factors and completing the below table. Further guidance can be found in the guidance and policy documents cited in Appendix A under each factor.

How to complete Part B

For each environmental factor, that is likely to be significantly impacted by the implementation of the proposal, make a copy of the table below and insert a summary of the relevant information relating to the proposal. The table can be broken down into more than one table per factor, if the need arises. For example the hydrological processes factor can be presented in two separate tables, one for surface water and one for groundwater, or similarly one for construction and one for operations.

For complex proposals a supplementary referral report can be provided in addition to the referral form. If this option is chosen the table must still be completed (summaries are acceptable) to assist the Office of the EPA with statistical reporting and filtering proposals for processing.

Proponents expecting an API level of assessment must provide information in accordance with the EPA's *Environmental Assessment Guideline for Preparation of an API-A environmental review document* (EAG 14).

For each of the significant environmental factors, complete the following table (Questions 1 – 10).

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Flora and Vegetation
2	EPA Objective, as defined in EAG 8	To maintain representation, diversity, viability and ecological function at the species, population and community level.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>Guidance Statement No. 51 – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in WA</p> <p>Position Statement No. 2 – Environmental Protection of Native Vegetation in WA</p> <p>Environmental Protection Bulletin No. 20 – Protection of Naturally Vegetated Areas through Planning and Development</p> <p>Position Statement No. 3 – Terrestrial Biological Surveys as an Element of Biodiversity Protection</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	<p>Consultation with DPaW, key stakeholder groups and the community regarding the potential impacts to flora and vegetation from the proposal has commenced (refer Section 5 and Appendix J of the Referral-Supporting Document).</p>
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>No Declared Rare Flora or Priority species have been recorded within the Development Envelope</p> <p>A majority of vegetation is considered to be in a Completely Degraded condition.</p> <p>The Development Envelope intersects four Bush Forever Sites:</p> <ul style="list-style-type: none"> • Bush Forever Site 303– Whitfords Avenue Bushland, Craigie/Padbury; • Bush Forever Site 299 – Yellagonga Regional Park, Wanneroo/Woodvale/Kingsley; • Bush Forever Site 407 – Woodvale Nature Reserve, Woodvale; and • Bush Forever Site 383 – Neerabup National Park, Lake Gnowergup Nature Reserve & Adjacent Bushland, Neerabup. <p>Refer Section 7 of Referral-Supporting Document.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	Potential impacts include: <ul style="list-style-type: none"> • Clearing of native vegetation • Disturbance to root systems • Spread of weeds and Dieback.
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed: <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	The pipeline route and recharge sites have been selected to avoid (where possible) or minimise the impacts to native vegetation (refer Section 2.7 of Referral-Supporting Document). Construction techniques have been selected to further reduce the impacts to native vegetation (refer Section 7 of Referral-Supporting Document). Rehabilitation will occur in areas where native vegetation has been impacted. Offsets are not considered to be required.
8	Residual impacts – review the residual impacts against the EPA objectives. <i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:</i> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	The proposal will result in the loss of a maximum of 2.15 ha of native vegetation. Of this, approximately 1.7 ha is considered to be native remnant; the remainder planted. Mapping prepared by the Department of Environment and Conservation (now the DPaW) shows that approximately 2,543 ha of native vegetation exists within a 4 km radius of the Development Envelope (DPaW 2013). Consequently the proposal will result in an overall reduction in native vegetation, before rehabilitation, of less than 1% of that present within a 4 km radius. Refer Section 7 of Referral-Supporting Document.
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9	<input checked="" type="checkbox"/> <i>meets the EPA's objective</i> <input type="checkbox"/> <i>may meet the EPA's objective</i> <input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i>
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Terrestrial Environmental Quality
2	EPA Objective, as defined in EAG 8	To maintain the quality of land and soils so that the environmental values, both ecological and social, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Guidance Statement No. 6 – Rehabilitation of Terrestrial Ecosystems
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	Consultation with key stakeholder groups and the community regarding the potential impacts from the proposal has commenced (refer Section 5 of the Referral-Supporting Document).
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The Beenyup WWTP site is a Registered Contaminated Site, classified as 'Possibly contaminated - investigation required' under the Contaminated Sites Act 2003 (CS Act).</p> <p>A Detailed Site Investigation has been undertaken and limited evidence of contamination was identified.</p> <p>The recharge pipeline does not intersect any other known Contaminated Sites and there are no registered Contaminated Sites adjacent to the northern or southern recharge sites.</p> <p>There is potential for acid sulphate soils (ASS) to occur along the recharge pipeline route and within the two recharge sites. The recharge pipeline intersects areas mapped as 'high to moderate' acid sulphate soil risk (DER 2014) near Lake Joondalup.</p>
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	<p>Potential impacts are limited to:</p> <ul style="list-style-type: none"> • Disturbance to ASS (pipeline intersects area of medium to high risk acid sulphate soils); and • Disturbance of a Contaminated Site.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>The generation of ASS during construction will be managed through objectives set out in the CEMF and via the implementation of a CEMP. Measures may include the removal and treatment (lime dosing) of excavated ASS material.</p> <p>Remediation of soils within Beenyup facility will be completed as required (currently underway). CEMP to document actions in the event that suspected contamination or hazardous materials are identified during construction.</p> <p>Offsets are not considered to be required.</p>
8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>Given the minimal and short term nature of disturbance of potential ASS, the investigations completed to date to determine the status of soils within the Beenyup facility, and the proposed management, the Proponent considers that the proposal will meet the EPA's objective for Terrestrial Environmental Quality.</p>
9	<p>EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i></p>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Terrestrial Fauna
2	EPA Objective, as defined in EAG 8	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>Guidance Statement No. 56 – Terrestrial Fauna Surveys for Environmental Impact Assessment in WA</p> <p>Position Statement No. 3 – Terrestrial Biological Surveys as an Element of Biodiversity Protection.</p> <p>Technical Guide on Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</p> <p>EAG 12 – Environmental Assessment Guideline for Consideration of Subterranean Fauna in Environmental Impact Assessment in Western Australia</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	Consultation with DPaW, key stakeholder groups and the community regarding the potential impacts to fauna and fauna habitats from the proposal has commenced (refer Section 5 of the Referral-Supporting Document).

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>Two species of conservation significance have been recorded within the Development Envelope:</p> <ul style="list-style-type: none"> • The Carnaby's Black Cockatoo (<i>Calyptorhynchus latirostris</i>); and • Southern Brown Bandicoot (<i>Isodon obesulus fusciventer</i>). <p>Several areas of native vegetation representing Black Cockatoo foraging habitat, and a total of 178 potential Black Cockatoo breeding trees, were recorded in the local area.</p> <p>A population of Rainbow Bee Eater (<i>Merops ornatus</i>) is known to nest in an area adjacent Lake Joondalup within the Development Envelope. The area of nesting is demarcated by the City of Wanneroo and will be avoided during the construction of the Proposal.</p> <p>Refer Section 7 of Referral-Supporting Document.</p>
<p>6</p>	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>Potential impacts include:</p> <ul style="list-style-type: none"> • Loss of Black Cockatoo foraging habitat; • Loss of potential Black Cockatoo breeding trees; • Noise disturbance of native fauna during construction; • Noise disturbance of native fauna during operations; and • Entrapment of fauna within open trench during construction.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>The pipeline route and recharge sites have been selected to avoid (where possible) or minimise the impacts to fauna habitat (refer Section 5 of Referral-Supporting Document).</p> <p>Construction techniques have been selected to further reduce the impacts to fauna habitat (refer Section 5 of Referral-Supporting Document).</p> <p>Rehabilitation will occur in areas where native vegetation has been impacted.</p> <p>Noise mitigation measures will be implemented.</p> <p>Offsets are not considered to be required.</p>
8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>The proposal will result in clearing a maximum of 2.15 ha of potential foraging habitat for the Black Cockatoo. A maximum of three potential breeding trees could be impacted.</p> <p>Mapping prepared by the Department of Environment and Conservation (now the DPaW) shows that approximately 2,543 ha of potential Black Cockatoo foraging habitat exists within a 4 km radius of the Development Envelope (DPaW 2013).</p> <p>Consequently the proposed action will result in an overall reduction of potential Black Cockatoo foraging habitat of less than 1% of that present within a 4 km radius.</p> <p>Numerous other potential breeding trees have been recorded in adjacent bushland.</p> <p>Refer Section 5 of Referral-Supporting Document.</p>
9	<p>EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i></p>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Hydrological Processes
2	EPA Objective, as defined in EAG 8	To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Position Statement No. 4 – Environmental Protection of Wetlands.
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	<p>The Inter-Agency Working Group (DoW, DoH) has taken part in workshops and risk assessments undertaken by the Corporation in implementing the Groundwater Replenishment Regulatory Framework (refer Section 2 of the Referral-Supporting Document).</p> <p>Consultation with key stakeholder groups and the community regarding the potential impacts from the proposal has commenced (refer Section 5 of the Referral-Supporting Document).</p>
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>A confining layer (upper section of the Wanneroo member), consisting of consolidated siltstone, occurs between the Leederville aquifer and Superficial aquifer) at the proposed northern recharge site (Water Corporation 2016).</p> <p>A confining layer (Kardinya Shale) occurs between the Leederville aquifer and Superficial aquifer at the southern recharge site (DoW 2013).</p> <p>The proposed volumes of recycled water entering the Leederville and Yarragadee aquifers are negligible in terms of the total volume of the aquifers.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
6	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>Potential impacts are as follows:</p> <ul style="list-style-type: none"> • Alteration of surface water flows due to the presence of the pipeline trench or installed pipeline; • Alteration of Superficial aquifer groundwater flows due to the presence of the pipeline trench or installed pipeline; • Altered groundwater levels in the Superficial aquifer resulting from increased pressure in the underlying aquifers; and • Alteration of pressure within the Leederville and Yarragadee aquifers.
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>Construction of the recharge pipeline will be completed in sections, with the length of sections of open trench kept to a minimum.</p> <p>The recharge pipeline will be installed below ground level, through a combination of open trenching and tunnelling techniques, such that no impact to surface water flows will occur during operations.</p> <p>Any required dewatering of the trench will be short term and managed through the implementation of a CEMP.</p> <p>Barriers to groundwater flow will be installed at intervals along the pipeline route to ensure that groundwater cannot preferentially flow parallel to the pipeline within the filled trench instead of crossing the pipeline alignment.</p> <p>Offsets are not considered to be required.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA’s objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>The Proponent considers that the proposal will not have a significant impact on hydrological regimes of groundwater and surface water, and that the proposal will meet the EPA’s objective for this factor.</p>
9	<p>EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA’s objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA’s objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i></p>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Inland Waters Environmental Quality
2	EPA Objective, as defined in EAG 8	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Position Statement No. 4 – Environmental Protection of Wetlands.
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	<p>Community support for recycled water becoming part of drinking water supply has been measured since 2009 and has remained consistent at an average of 72% in favour.</p> <p>The Inter-Agency Working Group (DoW, DoH) has taken part in workshops and risk assessments undertaken by the Corporation in implementing the Groundwater Replenishment Regulatory Framework (refer Section 2 of the Referral-Supporting Document).</p> <p>Consultation with key stakeholder groups and the community regarding the potential impacts from the proposal has commenced (refer Section 3 of the Referral-Supporting Document).</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The AWRP is designed to produce water that meets Australian Drinking Water Guidelines (ADWG). The treatment process involves a multi-stage process in which treated wastewater (from the Beenyup WWTP) undergoes ultra-filtration, reverse osmosis, ultra violet disinfection, and other processes to produce water that is as safe as drinking water.</p> <p>There are 13 Critical Control Points located throughout the WWTP and AWRP which provide continuous monitoring of performance and can automatically apply a controlling action if performance (water quality) varies from specification.</p> <p>The Leederville aquifer is confined in the vicinity of the proposed recharge sites (refer above).</p> <p>Numerous investigations have been completed to understand the potential risks associated with recharging the Leederville and Yarragadee aquifer (CyMod Systems 2013, Patterson et al. 2013, Rockwater 2013, Harris 2013).</p> <p>During the Groundwater Replenishment Trial over 58,200 groundwater samples were collected and compared against 254 water quality guidelines (as set by the DoH. All samples met health and environmental guidelines (Water Corporation 2013).</p>
<p>6</p>	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>The potential impacts are as follows:</p> <ul style="list-style-type: none"> • Change to water quality within aquifers; and • Change to water quality within wetlands.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>Selection of proposed recharge sites where the Leederville aquifer is confined.</p> <p>Critical Control Points at AWRP.</p> <p>Process Control Point at recharge sites.</p> <p>Ongoing water quality monitoring at the boundary of the recharge management zone.</p> <p>Intensive monitoring to confirm attainment of required water quality prior to recharge.</p> <p>Offsets are not considered to be required.</p>
8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA’s objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>Potential minor changes to groundwater chemistry within the immediate vicinity of the recharge bores (within 250m).</p>
9	<p>EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA’s objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA’s objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i></p>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Heritage
2	EPA Objective, as defined in EAG 8	To ensure that historical and cultural associations, and natural heritage, are not adversely affected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Guidance Statement No. 41 – Assessment of Aboriginal Heritage.
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	<p>The Whadjuk have been consulted during the development of the proposal and further consultation will take place in November 2016 to ensure compliance with the <i>Native Title Act 1993</i> and conditions of the South West Indigenous Land Use Agreement.</p> <p>The Proposal was referred to the State Heritage Council on 9 September 2016. The State Heritage Office responded to the Corporation on 21 September 2016 and has no objections to the Proposal.</p>
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The Development Envelope intersects one known Aboriginal Heritage Site: Lake Joondalup South-West (Place ID 3640)</p> <p>The Development Envelope intersects two Known European Heritage Sites:</p> <ul style="list-style-type: none"> • Cockman House; and • Perry's Paddock Cottage and Stables.
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	<p>The potential impacts are as follows:</p> <ul style="list-style-type: none"> • Disturbance to an Aboriginal Heritage site; and • Disturbance to a European Heritage site.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>The design of the Proposal has minimised the planned disturbance within the Aboriginal Heritage site boundary.</p> <p>The design of the Proposal has minimised the disturbance within the Perry's Paddock European Heritage site. No impacts to heritage-listed buildings will occur. Offsets are not considered to be required.</p>
8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>Temporary ground disturbance within boundary of Aboriginal and European heritage sites.</p>
9	<p>EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i></p>	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in EAG 8	Human Health
2	EPA Objective, as defined in EAG 8	To ensure that human health is not adversely affected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	EAG 13 – Environmental Assessment Guideline for Consideration of Environmental Impacts from Noise. Guidance Statement No. 3 – Separation Distance between Industrial and Sensitive Land Uses.
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> • <i>anticipated level of public interest in the impact;</i> • <i>consultation with regulatory agencies; and</i> • <i>consultation with community.</i> 	<p>Community support for recycled water becoming part of drinking water supply has been measured since 2009 and has remained consistent at an average of 72% in favour.</p> <p>The Inter-Agency Working Group (DoW, DoH) has taken part in workshops and risk assessments undertaken by the Corporation in implementing the Groundwater Replenishment Regulatory Framework (refer Section 3.3 of the Referral-Supporting Document).</p> <p>Consultation with key stakeholder groups and the community regarding the potential impacts from the proposal has commenced (refer Section 5 of the Referral-Supporting Document).</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The AWRP treatment process involves a multi-stage process in which treated wastewater (from the Beenyup WWTP) undergoes ultra-filtration, reverse osmosis, ultra violet disinfection, and other processes to produce water that is as safe as drinking water.</p> <p>There are 13 Critical Control Points located throughout the WWTP and AWRP which provide continuous monitoring of performance and can automatically apply a controlling action if performance (water quality) varies from specification.</p> <p>The Leederville aquifer is confined in the vicinity of the proposed recharge sites.</p> <p>Numerous investigations have been completed to understand the potential risks associated with recharging the Leederville and Yarragadee aquifer (CyMod Systems 2013, Patterson et al. 2013, Rockwater 2013, Harris 2013).</p> <p>During the Groundwater Replenishment Trial over 58,200 groundwater samples were collected and compared against 254 water quality guidelines (as set by the DoH. All samples met health and environmental guidelines (Water Corporation 2013).</p>
6	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>The potential impacts are:</p> <ul style="list-style-type: none"> • Impact to Superficial aquifer water quality; and • Impact to surface water quality.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> • <i>Avoidance - avoiding the adverse environmental impact altogether;</i> • <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i> • <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i> • <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i> 	<p>Aquifer and AWRP Risk Assessment .</p> <p>DoH endorsed Water Quality Guidelines.</p> <p>Critical Control Points at AWRP.</p> <p>Process Control Point at recharge sites.</p> <p>Ongoing water quality monitoring.</p> <p>Presence of confining layers to minimise likelihood of recycled water reaching the Superficial aquifer.</p>
8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> • <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i> • <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i> • <i>comparison against any established environmental policies, guidelines, and standards.</i> 	<p>No residual impacts are expected.</p> <p>Offsets are not considered to be required.</p>
9	<p>EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9</p>	<p><input checked="" type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i></p>	

In circumstances where there was some uncertainty on the level of significance of a particular factor it is recommended that a brief summary (no longer than 1 - 2 paragraphs) is provided on the steps taken to determine why a factor was not considered to be significant.