



Referral of a Proposal to the Environmental Protection Authority under Section 38(1) of the Environmental Protection Act.
Referral by the Proponent

PURPOSE OF THIS FORM

Section 38(1) of the *Environmental Protection Act 1986* provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the Act.

A referral to the EPA by a proponent under Section 38(1) must be made on this form.

Before completing this form, proponents are encouraged to familiarise themselves with the EPA's *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* (accessed at the EPA's website at www.epa.wa.gov.au or by contacting the EPA on 6467 5419).

Proponents need to complete Parts A and B of the form by marking the appropriate boxes and providing explanatory or additional information where requested. Part B should be completed based on information known to the proponent. Only those sections of Part B that are pertinent to the proposal need to be completed. If space is insufficient, attach additional pages. Where information is contained in a report that is to be submitted with the referral form, the proponent may complete sections of the form by referring to the pertinent section of the report.

Proponents are encouraged to attach any other environmental information they consider may be relevant to the EPA for making a decision on whether or not to assess the proposal, and, if it is to be assessed, the level of assessment. In general, referrals should contain information on the potential environmental impacts of the proposal, the proposed management mechanisms to be implemented to minimise and mitigate for these impacts, and how the principles of the EP Act have been addressed by the proposal.

In addition to providing a hard copy of referral documentation, proponents are also requested to provide an electronic copy of the referral document, noting that section 39(2) of the EP Act provides for a proponent to request that matters of a confidential nature not be kept on the public record. If confidential matters are included in the referral, proponents are requested to identify the confidential information at this stage of the process, specifically request that it be treated as confidential, and submit the confidential information in a separate hard copy attachment to the referral document. The electronic copy of the referral should be identical to the hard copy of the referral document, excluding any confidential attachment.

You may need to contact government agencies or local authorities to obtain information required by this form. A list of key agencies and their contact details is provided in Attachment 1.

Where the EPA decides that a proposal will be assessed at the level of Public Environmental Review or Environmental Review and Management Programme, it will also require the proponent to prepare an Environmental Scoping Document (refer *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002*).

Proponents should also be aware of the need to determine their obligations under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act is separate legislation to the Environmental Protection Act and it identifies a number of matters of national environmental significance which are subject to assessment and approval by the Commonwealth. The matters identified as triggers for the Commonwealth assessment and approval regime are World Heritage properties, Ramsar wetlands, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, and nuclear actions (refer to the Department of Environment and Water Resources website at www.environment.gov.au). Questions in this referral form that may be relevant to matters of national environmental significance are marked with a #.

- If yes above, have you lodged any of the necessary applications or have you discussed the proposal with any person(s) at the Agency or Local Authority?

Yes

No

If yes, name all Agencies and Local Authorities for which applications have been submitted or with whom the proposal has been discussed.

Yes. The necessary approvals required that are required at this stage of the Trial have been gained from DoW and DoH. The DoH approval is required prior to commencing injection of high quality water (GWR plant product water) into the Leederville aquifer. This will include validation of water quality requirements through the GWR plant for at least two months prior to commencing injection and confirmation that required monitoring will be undertaken during the Trial period in accordance with the Monitoring Plan.

Additionally, the Trial has been considered through an inter-governmental panel (The Inter Agency Working Group) consisting of the Department of Environment and Conservation (DEC), DoW, DoH, and the Water Corporation. This provides an approval pathway for the project through the Interagency Agreement (20 March 2007).

- What is the current land use on the property, and the extent (area in hectares) of the property?

The Trial is proposed to be built adjacent to the existing Beenyup Wastewater Treatment Plant (WWTP). The Beenyup WWTP is part of a larger site of approximately 83ha of Crown Land vested to the Water Corporation (the Beenyup Site). The site includes the WWTP (approximately 16.5ha), commercial property (approximately 5ha), Bush Forever Site 303 (24.5ha) and other remnant bush areas.

1.2 Proposal Description (Please attach extra pages where necessary)

- Provide a description of the proposal.

This application addresses the proposed works to construct and operate a Groundwater Replenishment Trial. The GWR Plant will be constructed adjacent to, but operate independent of, the Beenyup WWTP. The GWR Plant will be licensed (separately from the Beenyup WWTP) to authorise disposal of advanced treated wastewater to the Leederville aquifer.

During operation, the GWR plant, an advanced tertiary treatment process, will use dual membrane technology (membrane filtration plus reverse osmosis, RO) to treat up to 7.5 ML/d of secondary treated wastewater from the Beenyup WWTP. The initial membrane filtration will remove suspended solids and colloidal material from the feed water. The filtrate from this process will then be further treated by reverse osmosis, and then treated with UV to provide disinfection, degassed to remove excess carbon dioxide and pH adjusted with sodium hydroxide. The wastewater from the process - comprising filter backwash, RO brine and cleaning solutions - will be pumped to the Wanneroo Main Sewer upstream of the Beenyup WWTP. The waste stream will meet the Water Corporation's Industrial Waste Acceptance Criteria.

The high quality water generated by the GWR plant will be injected into the Leederville aquifer for groundwater replenishment. The water will be transported a short distance to the adjacent injection bore. The injection stream will be targeted for the Leederville aquifer at a depth of 117m and 223.9m below ground surface. The Leederville aquifer is separated from the superficial aquifer by the predominantly siltstone Pinjar member and it is separated from the lower Yarragadee by the South Perth Shale aquiclude.

The Trial will:

- *Assist to build community confidence in groundwater replenishment*
- *Provide the Agencies with the necessary information for policy development for a full-scale groundwater replenishment scheme*
- *Demonstrate technical feasibility*
- *Provide background information for the design and operation of a full scale groundwater replenishment scheme.*

- What is the proposed ultimate extent (area in hectares) of the activity?

The area of land for the Trial site is approximately 1.1ha.

- Provide the timeframe in which the activity or development is proposed to occur. (Include start and finish dates where applicable)

Construction is expected to commence around August 2008. Construction (including testing and pre-commissioning) is expected to continue for twelve to eighteen months. Commissioning is expected to proceed for 2-3 months and the Trial will operate for three years.

- Provide details of any staging of the proposal.

This Trial, if successful, will provide valuable data for a large-scale groundwater replenishment scheme. A large-scale groundwater replenishment scheme would be referred to the Environmental Protection Authority.

- Indicate whether, and in what way, the proposal is related to other proposals in the region.

1.3 Location information

- Provide proposal location details in the following two ways:
 - a) Electronic spatial data
 - GIS or CAD on CD, depicting the proposal extent, geo-referenced and conforming to the following parameters:
 - datum: GDA94
 - projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA)
 - format: Arcview shapefile, Arcinfo coverages, Microstation or AutoCAD.

AND

- b) Maps and/or directions
 - Any maps or diagrams of the proposal, together with the following directions:
 - for urban areas: street address, lot number, the suburb and nearest road intersection;
 - for remote localities: the nearest town, together with distance and direction from that town to the proposal site.

Please also attach the following map/plans, clearly showing the location of the development in its regional and local context.

❖ Locality plan – Broad Scale

Provide a locality plan (preferably superimposed on an aerial photograph) to identify:

- proposed development site and any associated infrastructure
- main roads
- urban centres
- wetlands and watercourses
- remnant native vegetation
- adjoining land uses (including recreation)
- sensitive marine areas

❖ Site Plan – Proposal Details

Provide a site plan to scale and indicate the location of:

- lot boundaries
- road frontages
- extent of the proposed development area
- extent of the proposed buffer area (if applicable)

❖ **Site Plan – Existing Environment**

Provide a site plan to scale (the same scale as above) and indicate the location of:

- lot boundaries
- road frontages
- any information required to be shown from Section 2.2 of this form
- extent of native vegetation of the site (the extent of overlap between the proposed development area and the area of native vegetation must be highlighted)
- extent of hydrological features on the site (this includes wetlands, watercourses, creek lines, seasonal creeks and artificial drainage lines)
- sensitive marine areas

PART B - ENVIRONMENTAL IMPACTS AND MANAGEMENT COMMITMENTS

2. ENVIRONMENTAL IMPACTS

Describe the impacts of the proposal on the following elements of the environment, through the questions below:

- (i) flora and vegetation #;
- (ii) fauna #;
- (iii) rivers, creeks, wetlands and estuaries;
- (iv) significant areas and/ or land features;
- (v) coastal zone areas;
- (vi) marine areas and biota #;
- (vii) water supply and drainage catchments;
- (viii) pollution;
- (ix) greenhouse gas emissions;
- (x) contamination;
- (xi) social surroundings; and
- (xii) risk.

These features should be shown on the site plan, where appropriate)

For all information, please indicate:

- (a) the source of the information; and
- (b) the currency of the information.

2.1 Flora and Vegetation

- Do you propose to clear any native flora and vegetation as a part of this proposal?

(A proposal to clear native vegetation may require a clearing permit under Part V of the EP Act (*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*). Please contact the Department of Environment and Conservation (DEC) for more information.

(please tick)

Yes

If yes, complete the rest of this section

No

If no, go to the next section

- How much vegetation are you proposing to clear (in hectares)?

The Trial site is proposed for an area that has largely been cleared for Beenyup WWTP operations, and only minimal remnant vegetation remains.

Less than 1ha of native vegetation will be cleared (outside of the Bush Forever site) for the project works. The exact location of GWR plant infrastructure will be considered during detailed design to minimise the removal of native vegetation.

The Water Corporation believes a clearing permit is not required because clearing activities are exempt under Regulation 5, Item 1 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004: Clearing to construct a building.

- Have you submitted an application to clear native vegetation to the DEC (unless you are exempt from such a requirement)?
- Yes No **If yes**, on what date and to which office was the application submitted of the DEC?
- Are you aware of any recent flora surveys carried out over the area to be disturbed by this proposal?
- Yes No **If yes**, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey/s. (If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.)

A comprehensive flora and vegetation survey was conducted for the Beenyup Site in 2006 (Bennett Environmental). This accompanied the Beenyup Site Management Plan.

- Has a search of DEC records for known occurrences of rare or priority flora or threatened ecological communities been conducted for the site? #
- Yes No If you are proposing to clear native vegetation for any part of your proposal, a search of DEC records of known occurrences of rare or priority flora and threatened ecological communities will be required. Please contact DEC for more information.
- Are there any known occurrences of rare or priority flora or threatened ecological communities on the site? #
- Yes No **If yes**, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

There are no known rare or priority flora or threatened ecological communities at the Trial site.

- If located within the Perth Metropolitan Region, is the proposed development within or adjacent to a listed Bush Forever Site? (You will need to contact the Bush Forever Office, at the Department for Planning and Infrastructure)
- Yes No **If yes**, please indicate which Bush Forever site is affected (site number and name of site where appropriate).

The Bush Forever Site 303 is located 100m to the east of the proposed Trial site. This Bush Forever site forms the eastern boundary of the Beenyup site.

- What is the condition of the vegetation at the site?

The Trial site is located in an area that has largely been cleared. It only contains a fragment of remnant bush area. The area is dominated by weedy vegetation.