



MINISTER FOR THE ENVIRONMENT AND HERITAGE;
WATER RESOURCES

Statement No.

000568

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**KEMERTON WASTEWATER TREATMENT PLANT
AND TREATED WASTEWATER REUSE AT WOODLOT, BINNINGUP**

Proposal: The construction and operation of a wastewater treatment plant at Kemerton, associated pipeline and pressure main, and woodlot at Binningup, as documented in schedule 1 of this statement.

Proponent: Water Corporation

Proponent Address: 629 Newcastle Street, Leederville, Western Australia 6007

Assessment Number: 1376

Report of the Environmental Protection Authority: Bulletin 1011

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

Procedural conditions

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.
- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

Published on

26 JUN 2001

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments, which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment and Heritage under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment and Heritage has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment and Heritage within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment and Heritage will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment and Heritage for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.
- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.
- 5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment and Heritage.

Environmental conditions

6 Environmental Management System

- 6-1 In order to manage the environmental impacts of the project, and to fulfill the requirements of the conditions and procedures in this statement, prior to the commencement of construction of the wastewater treatment plant, the pressure main and pipeline, and the establishment of the woodlot, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:
 - 1 An environmental policy and corporate commitment to it;
 - 2 Mechanisms and processes to ensure:
 - (1) planning to meet environmental requirements;
 - (2) implementation and operation of actions to meet environmental requirements;
 - (3) measurement and evaluation of environmental performance; and
 - 3 Review and improvement of environmental outcomes.
- 6-2 The proponent shall implement the environmental management system referred to in condition 6-1.

DR JUDY EDWARDS MLA
MINISTER FOR THE ENVIRONMENT AND HERITAGE

26 JUN 2001

Schedule 1

The Proposal (1376)

The proposal is for the works and operation of a wastewater treatment plant up to a design capacity of 3.6 ML per day and associated pipeline and pressure main, and the operation of a woodlot reuse scheme for the first three years. This will enable monitoring and evaluation to be undertaken to determine a longer term strategy for development and operation of the reuse scheme. The works and operation for the first three years form part of planned Stage 1 of the scheme, which will extend to the year 2010.

A further two stages (extending to 2040) are planned by the proponent.

The proposal (Figure 1) consists of:

- An advanced activated sludge wastewater treatment plant at Kemerton - Stage 1 design capacity will be 3.6 ML/day;
- A 17 ML storage dam at the Kemerton wastewater treatment plant;
- A treated wastewater pumping station located at Kemerton;
- A 12.4 kilometre pipeline to deliver wastewater from Eaton to Kemerton wastewater treatment plant;
- A 7.4 kilometre pressure main to deliver reclaimed water to the woodlot site located near Binningup;
- A 10ML treated wastewater storage dam at the woodlot site; and
- A 60 hectare (minimum) woodlot irrigation site at Binningup.

See Key Proposal Characteristics in Table 1 attached.

Table 1: Key proposal characteristics (1376)

Item	Feature	Characteristic
Wastewater treatment plant	General description	Intermittently decanted extended aeration (IDEA) plant (or other equivalent plant) including at least two sludge lagoons and an on-site storage for treated wastewater.
	Location	Lot 26 Marriott Road, Kemerton
	Treatment capacity (Year 2010)	3.6 ML/day
	Projected flow (Year 2002)	2.0 ML/day
	(Year 2003)	2.4 ML/day
	(Year 2004)	2.8 ML/day
	Inflow water quality	275 mg/L BOD (unfiltered) 300 mg/L Suspended Solids 70 mg/L Nitrogen 15 mg/L Phosphorus
	Treated water quality from WWTP (apart from commissioning)	20 mg/L BOD 20 mg/L Suspended Solids 7.5 mg/L N (annual mean) 10 mg/L N (annual 75%-ile) 1.0 mg/L P (annual mean) 1.5 mg/L P (annual 75%-ile)
	On-site storage	17 ML
Treated wastewater conveyance pipeline	Location	Northern side of the Sons of Gwalia haul road and Rosamel Road between the WWTP site and the Old Coast Road, then crossing to the western side of the Old Coast Road north to the woodlot site. Design and pipeline alignment to be addressed in EMP and approved prior to construction of WWTP.
	Length (approximate)	7.4 kilometres
	Size	225 mm diameter
	Flow rate (maximum for Stage 3)	71 L/second
Raw wastewater conveyance pipeline	Location	Pipeline from Eaton to Kemerton WWTP. Design and pipeline alignment to be addressed in EMP and approved prior to construction of WWTP.
	Length (approximate)	12.4 kilometres

Sewage pumping station facility Woodlot	Location	Eaton and Australind
	General description	Irrigated Tasmanian blue gum (<i>Eucalyptus globulus</i>) plantation
	Location	Lot Nos D36882/3-5, D36635/2 South of Binningup Road and west of the Old Coast Road near Binningup.
	Area	Minimum 60 hectares Note: See commitment 7 to increase area of woodlot in subsequent years.
	On-site storage	10 ML

Figures

See figures 1, 3, 5, and 6 (attached).

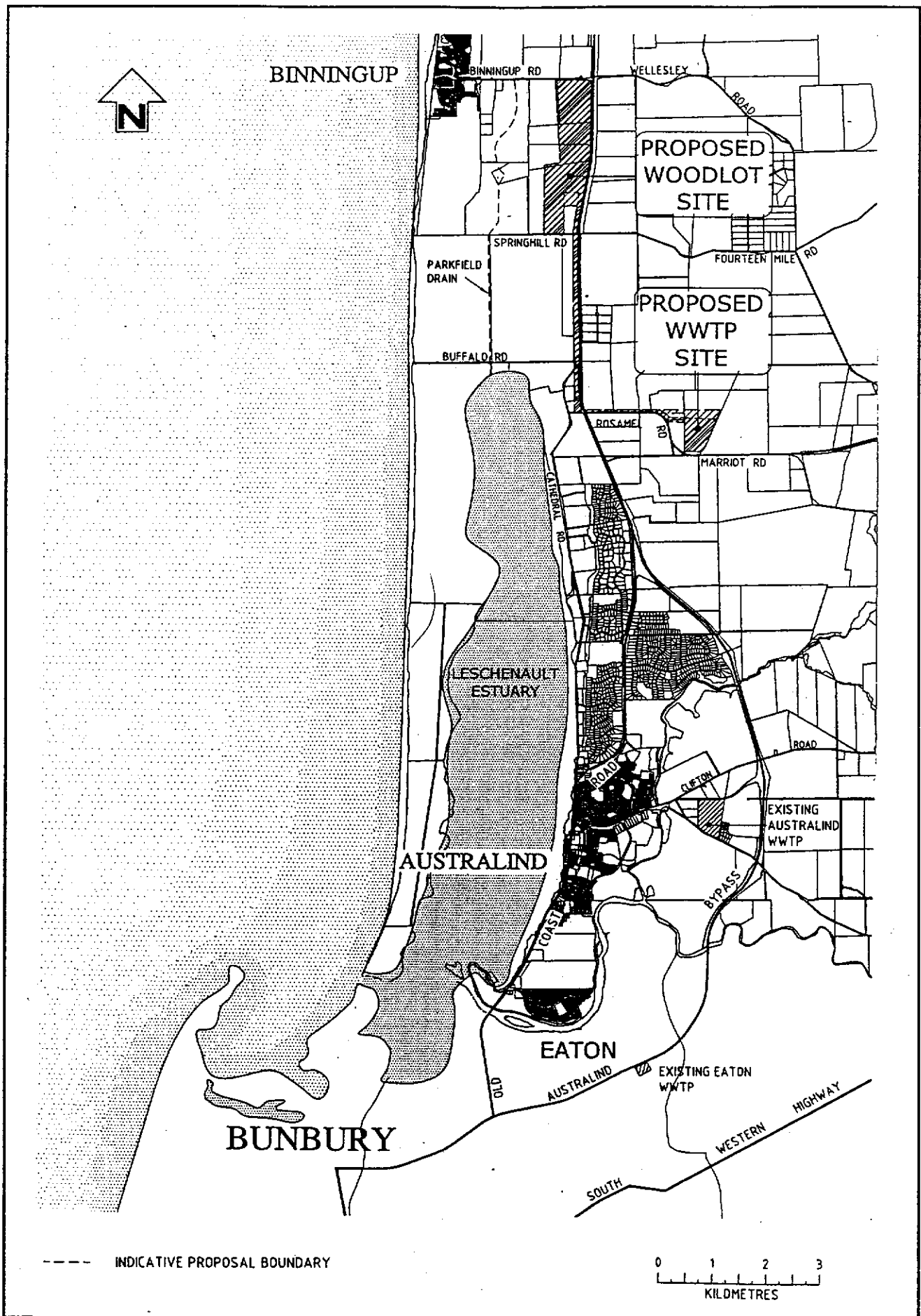


Figure 1. Location of proposal.

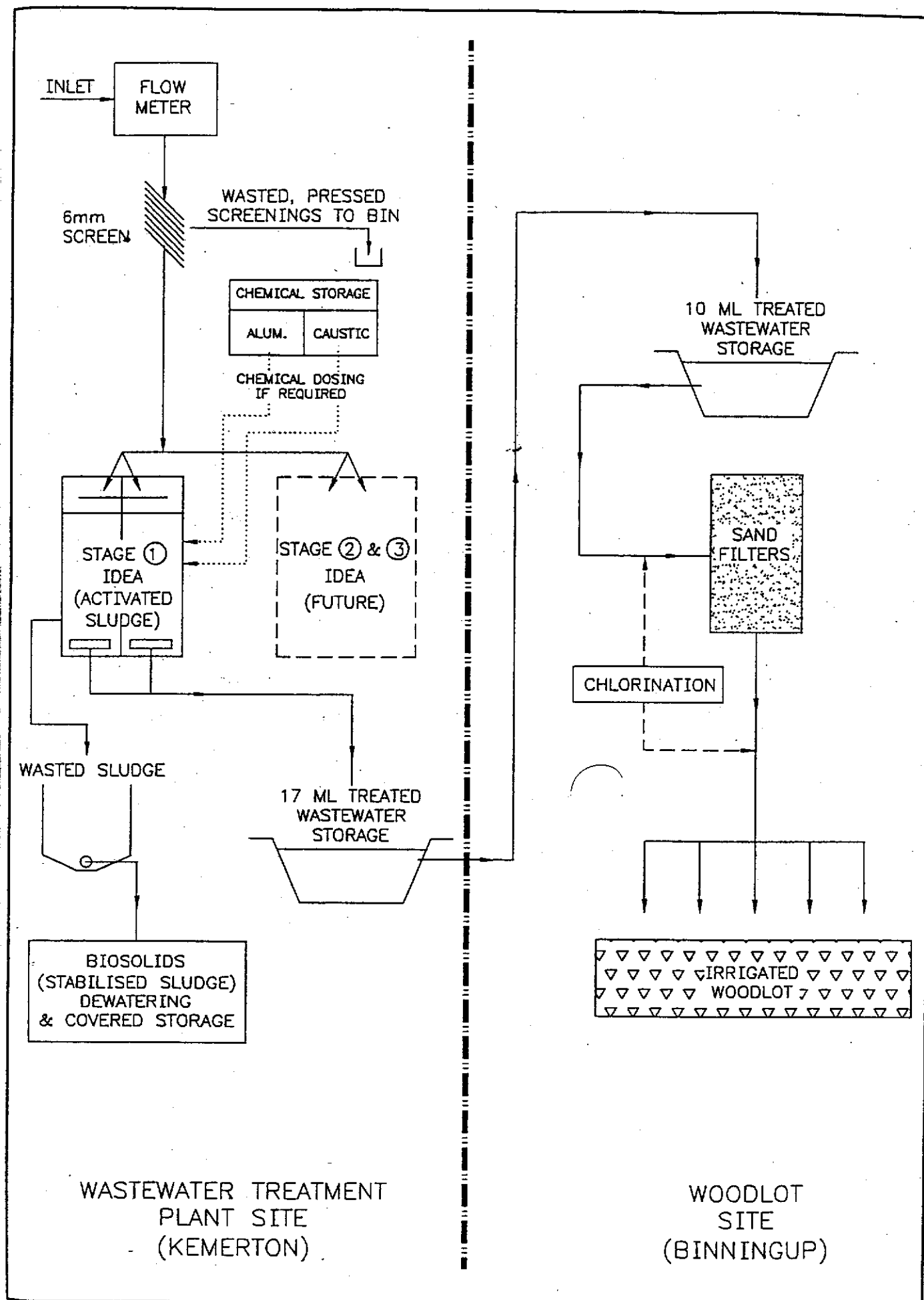


Figure 3. Wastewater treatment process at Kemerton and reuse at woodlot site.

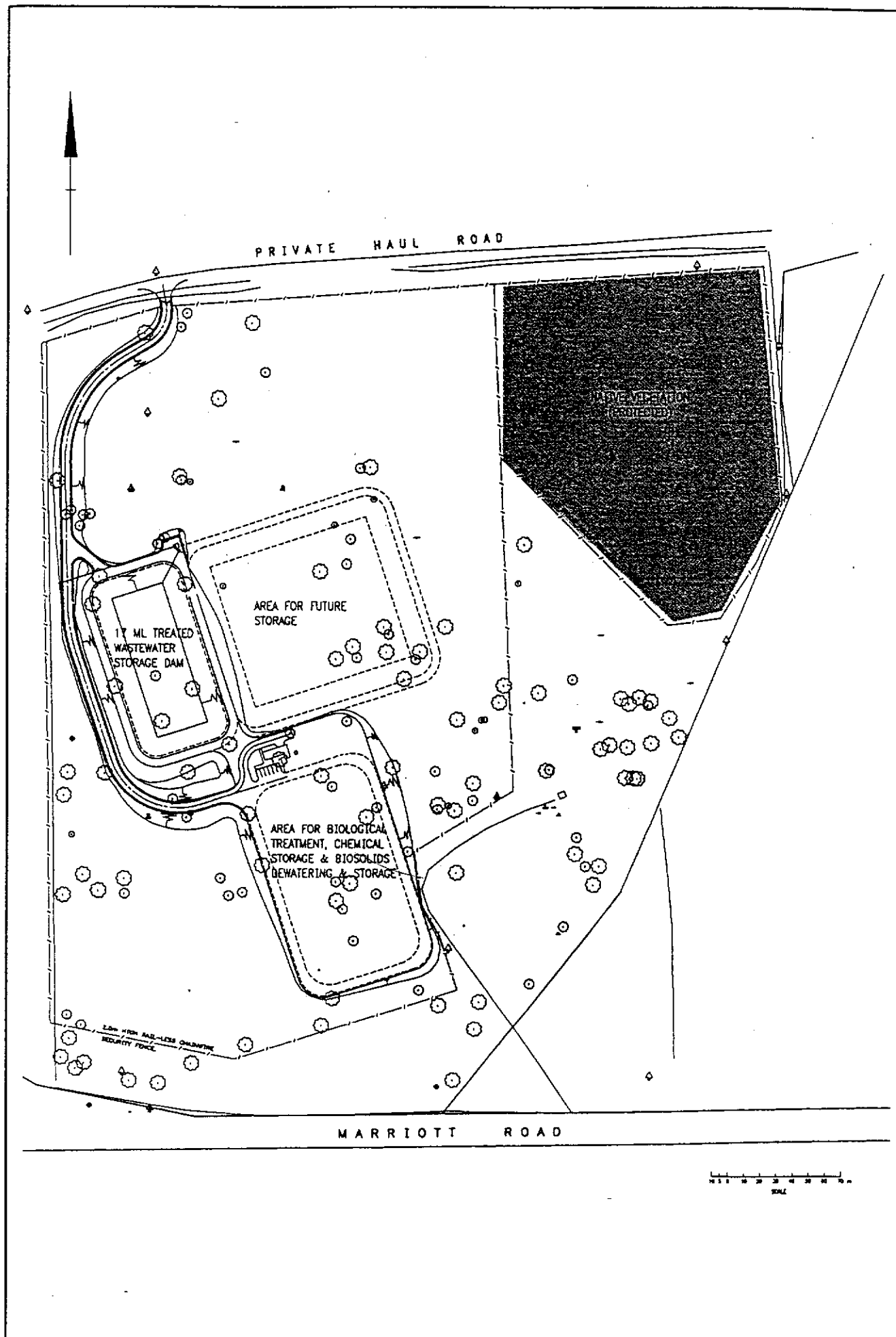


Figure 5. Plant layout showing vegetation on proposed Kemerton WWTP site.

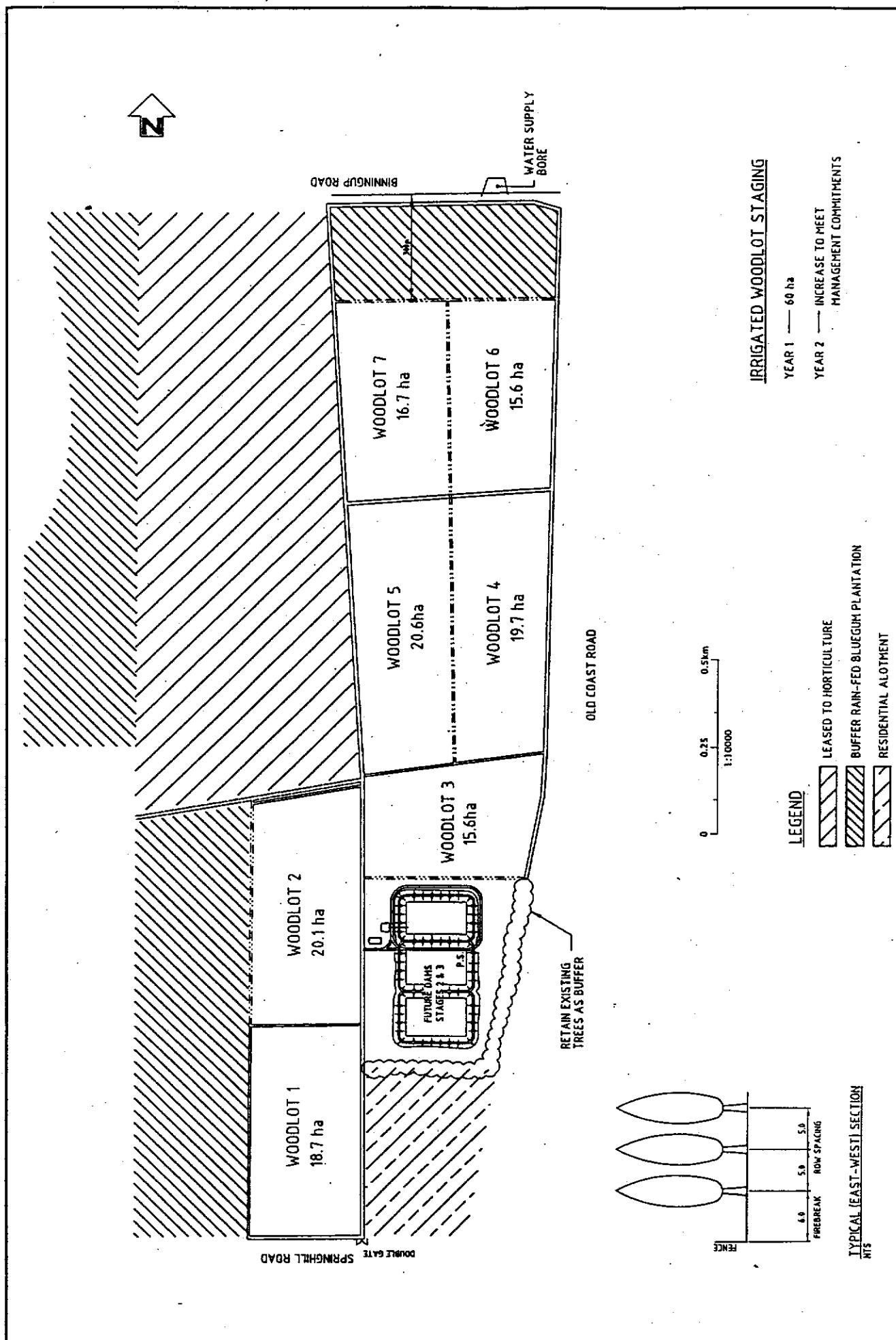


Figure 6. Woodlot layout at Binningup.

**Proponent's Consolidated Environmental Management
Commitments**

15 June 2001

**KEMERTON WASTEWATER TREATMENT PLANT
&
TREATED WASTEWATER REUSE AT WOODLOT,
BINNINGUP**

Water Corporation

PROPONENT'S CONSOLIDATED ENVIRONMENTAL MANAGEMENT COMMITMENTS

KEMERTON WASTEWATER TREATMENT PLANT & TREATED WASTEWATER REUSE AT WOODLOT, BINNINGUP

(Assessment No. 1376)

No.	Topic	Action	Objectives	Timing	Advice from	Evidence of complying with commitment
1	Vegetation	Erect an exclusion fence around the excellent quality native vegetation in the north-eastern corner of the WWTP site.	To ensure no inadvertent impacts on the vegetation during construction of the WWTP facilities.	Prior to construction.	Shire of Harvey	Fence erected.
2	Groundwater quality	Prepare a Nutrient and Irrigation Management Plan for the woodlot.	To maximise take up of nutrients by the woodlot and to minimise nutrient concentrations in the groundwater under the woodlot.	Prior to irrigation of the woodlot with treated wastewater.	WRC	Plan submitted to DEP for approval.
3	Groundwater quality	Implement the Nutrient and Irrigation Management Plan for the woodlot.	To maximise take up of nutrients by the woodlot and to minimise nutrient concentrations in the groundwater under the woodlot.	At commencement of irrigation of the woodlot with treated wastewater.	WRC	Plan implemented.
4	Groundwater quality	Design a Groundwater Monitoring Program which includes the installation of groundwater monitoring bores.	To determine the quantity, transport and fate of nutrients leaching from the woodlot and adjacent horticulture.	At least 9 months prior to irrigation of the woodlot with treated wastewater.	LIMA / WRC	Program submitted to DEP for approval.
5	Groundwater quality	Implement the Groundwater Monitoring Program.	To determine the quantity, transport and fate of nutrients leaching from the woodlot and adjacent horticulture.	At least 6 months prior to irrigation of the woodlot with treated wastewater.	LIMA / WRC	Program implemented.
6	Groundwater quality	Maintain the rainfed (tree) buffer to the west of the irrigated woodlot.	To provide an additional barrier for the take up of nutrients migrating from the irrigated woodlot towards Parkfield Drain.	Prior to commissioning of the woodlot.	-	Rainfed buffer installed.

No.	Topic	Action	Objectives	Timing	Advice from	Evidence of complying with commitment
7	Groundwater quality	Increase area of irrigated trees from 60ha in subsequent years if excess treated wastewater cannot be redirected to higher value reuse applications.	To ensure that annual nitrogen application rates do not exceed 100kgN/ha and that annual water application rates do not exceed the growth requirements of the trees.	Within 26 months following approval of the proposal.	-	Additional irrigated trees planted.
8	Wastewater management	Report on options investigated and recommended mitigation strategy in the event that the monitoring program shows that a groundwater plume may enter Parkfield Drain and cause an adverse effect.	To ensure that additional infrastructure can be installed in time to prevent an adverse effect on Parkfield Drain and Leschenault Estuary.	Within 30 months following approval of proposal.	WRC	Report submitted to EPA for approval.
9	Wastewater management	Implement mitigation strategy and appropriate option(s) if groundwater plume is likely to enter Parkfield Drain and cause an adverse effect.	To prevent an adverse effect on Parkfield Drain and Leschenault Estuary.	Within 54 months following approval of proposal.	-	Mitigation strategy implemented.
10	Wastewater management	Provide additional storage capacity if alternative options investigated under commitment no. 8 are not acceptable.	To provide a contingency to ensure that irrigation rates match evapo-transpiration rates by summer of 2004/2005, if alternative options investigated are not acceptable.	Within 54 months following approval of proposal.	-	Additional storage commissioned.
11	Design of wastewater storage facilities	Line the treated wastewater storages and sludge lagoons with a synthetic or clay liner.	To prevent leakage of nutrient-enriched water to the groundwater table.	Prior to commissioning of the facilities.	-	Liner installed.
12	Construction	Prepare an EMP for the routing and construction of the wastewater pipelines from Eaton and Australind to Kemerton.	To ensure no inadvertent impacts on vegetation during construction of the pipeline.	Prior to construction.	WRC CALM	EMP submitted for approval.
13	Construction	Implement the EMP for the routing and construction of the wastewater pipelines from Eaton and Australind to Kemerton.	To ensure no inadvertent impacts on vegetation during construction of the pipeline.	During construction.	-	EMP implemented.
14	Construction	Prepare an EMP for the routing and construction of the wastewater pipeline from Kemerton to the woodlot at Binningup.	To ensure no inadvertent impacts on vegetation during construction of the pipeline.	Prior to construction.	-	EMP submitted for approval.

No.	Topic	Action	Objectives	Timing	Advice from	Evidence of complying with commitment
15	Construction	Implement the EMP for the routing and construction of the wastewater pipeline from Kemerton to the woodlot at Binningup.	To ensure no inadvertent impacts on vegetation during construction of the pipeline.	During construction.	-	EMP implemented.
16	Construction	Prepare an EMP for the construction of the Australind Transfer Pumping Station, which will convey wastewater from Australind to Kemerton.	To ensure no inadvertent impacts on vegetation during construction of the pump station.	Prior to construction.	-	EMP submitted for approval.
17	Construction	Implement the EMP for the construction of the Australind Transfer Pumping Station.	To ensure no inadvertent impacts on vegetation during construction of the pump station.	During construction.	-	EMP implemented.
18	Visual	Plant a screen of trees and maintain existing trees between the woodlot dam embankment and the property boundary on Old Coast Road.	To minimise visual impact of the storage dam at the woodlot site (from Old Coast Road).	Prior to commissioning.	Shire of Harvey	Screen planted.
19	Aboriginal heritage	Conduct a detailed archaeological survey to determine if suspected artefact sites would be impacted by the proposal.	To prevent inadvertent impacts on recorded sites of cultural significance.	Prior to construction.	AAD	Survey approved, and any necessary clearances obtained.
20	Aboriginal heritage	In the event that the survey (commitment no. 19) indicates the presence of artefacts and/or other aboriginal heritage sites, the proponent will: <ul style="list-style-type: none"> • Collect and record the findings of the survey; • Consult with relevant aboriginal communities regarding additional surveys as well as appropriate action to protect the site and the artefacts; • Prepare a management plan to address the issues; and • Implement the management plan. 	To prevent inadvertent impacts on recorded sites of cultural significance, and to meet the requirements of the AAD.	Prior to construction	AAD	Survey approved, and any necessary clearances obtained.

No.	Topic	Action	Objectives	Timing	Advice from	Evidence of complying with commitment
21	Potable water supply	Monitor quality of water supply in bore west of woodlot (pt Lot 4 on Diagram 24320) and provide alternative supply if quality is adversely affected as a result of proposal.	No adverse impact on water supply as a result of proposal.	From commissioning	Health Dept	Monitoring results from water supply bore and up-gradient monitoring bores
22	Community consultation	Consult with community interest groups on proposal and its progress.	To inform, seek feedback and address community concerns about the project.	Prior to construction, and subsequently.	-	Record of consultation including issues raised and actions to address issues.

Abbreviations:

AAD: Aboriginal Affairs Department
 DEP: Department of Environmental Protection
 EMP: Environmental Management Plan
 EPA: Environmental Protection Authority
 LIMA: Leschenault Inlet Management Authority
 WRC: Waters & Rivers Commission
 WWTP: Wastewater Treatment Plant



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Department of Environmental Protection

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Our Ref: A/444/01

Enq: I D'Souza

Attn: George Golowyn

**KEMERTON WASTEWATER TREATMENT PLANT AND TREATED
WASTEWATER REUSE AT WOODLOT, BINNINGUP (STATEMENT 568)-
CHANGE TO PROPOSAL**

I refer to the Change to the proposal documentation submitted by the proponent, Water Corporation on 28 December 2001, for the Kemerton wastewater treatment plant (WWTP) and woodlot project. The change is a proposal to establish a 30ha woodlot at Kemerton to be irrigated by wastewater from the wastewater treatment plant at Kemerton.

The Environmental Protection Authority has advised that the submitted proposal has environmental benefit and can be regarded as a non-substantial change.

Accordingly, under delegation from the Chief Executive Officer, and using the audit code from the agreed audit table for the proposal, I advise that:

- the requirements of condition M1.3 have been satisfactorily met to date; and
- the proponent is considered to be in compliance with the requirements of the project and may now proceed to implement the proposal for a 30ha woodlot at Kemerton, subject to the commitments made for the proposal.

The commitments made by the proponent in the document of 28 December 2001 are stated as follows:

1. Protect native vegetation during construction works;
2. Conduct a detailed archaeological survey to ensure that artifact sites will not be impacted;
3. Maintain a rain-fed (tree) buffer to the west of the irrigated woodlot; construct and design wastewater storage dam with a synthetic liner in accordance with Australian Standards to protect groundwater and surface water quality;
4. Protect groundwater and surface water quality by preparing a Nutrient and Irrigation Management Plan for the woodlot, although modelling shows that even assuming a worst case nutrients will not be a problem.




5. Design and implement a monitoring program including installation of groundwater monitoring bores to determine impact of irrigation on groundwater and surface water quality;
6. Prepare a mitigation strategy to address groundwater contamination in the event that monitoring shows that a groundwater plume is likely to enter Parkfield Drain and cause an adverse impact.
7. Prepare Environmental Management Plans for the construction of pipelines, pressure mains and transfer pumping stations.

It is noted that commitment 6 is not directly relevant to the woodlot at Kemerton but will be implemented if Water Corporation proceeds with the woodlot at Binningup. However, the Department of Environmental Protection (DEP) expects that the proponent will have in place a mitigation strategy, should groundwater contamination occur at the Kemerton woodlot.

Would you please forward all relevant data in relation to protection of vegetation, heritage sites, nutrient and groundwater management and environmental management plans in relation to pipeline routes to the DEP. The DEP advises that all these plans and data will need to be provided prior to any construction works.

This advice is valid for 5 years because it is based on information currently available to the Department, which, if it changes with time, may require a review. If the plans are not implemented in this timeframe, this clearance lapses and revised plans would have to be submitted.

The audit table has been updated in accordance with this letter. Please note that the above information refers to environmental requirements in statement 568 and does not replace any responsibilities you may have for seeking approvals from other government agencies, including those responsibilities required under Part V of the Environmental Protection Act, to begin implementation of the proposal.



James Treloar
MANAGER
ENVIRONMENTAL AUDIT SECTION

Date: 24/1/02

cc: DEP Bunbury

Attachment 1 to Ministerial Statement 568

Change to proposal approved under section 45C of the *Environmental Protection Act 1986*

This Attachment replaces Schedule 1 and all Figures of Ministerial Statement 568

Proposal: **Kemerton wastewater treatment plant and treated wastewater reuse**

Proponent: **Water Corporation**

Changes:

- Updated title and description to refer to Kemerton woodlot - Binningup woodlot deleted
- Refined general description of the wastewater treatment plant (WWTP)
- Location description of the WWTP is updated to the current cadastral data description
- Removed references to the 2002, 2003 and 2004 projected treatment capacities - The current maximum treatment capacity (3.6 ML/day) is retained.
- Removed references to treated wastewater quality parameters (now retained solely under Part V Licence L7802)
- Removed reference to the 10 ML storage dam at Binningup and the 7.4 kilometre wastewater conveyance pipeline to Binningup, as neither will be constructed
- Removed reference to Eaton – as Eaton's wastewater is now directed to Bunbury WWTP
- Removed reference to 60 ha woodlot at Binningup
- Updated woodlot site details to reflect Kemerton woodlot - i.e general description, location, area (now 30ha)
- Removed 10ML on-site treated wastewater storage dam (no longer required at Binningup)

Table 1: Summary of the Proposal

Proposal Title	Kemerton wastewater treatment plant and treated wastewater reuse
Short Description	The construction and operation of a wastewater treatment plant at Kemerton, associated pipeline and pressure main, and woodlot at Kemerton

Table 2: Location and authorised extent of physical and operational elements

Element	Location	Previously Authorised Extent	Authorised Extent
Physical elements			
Wastewater treatment plant (Sequence Batch Reactor activated sludge plant with on-site storage for treated wastewater).	Figure 2; Figure 3	Lot 26 Marriott Road, Kemerton	Lot 310 on Plan 31339 (no change to physical location; updated location description; Figure 2 and Figure 3 updated)
Wastewater treatment plant on-site storage	Figure 3	17 ML	Figure 3 updated
Raw wastewater conveyance pipeline	Pipeline to Kemerton WWTP	12.4 km Pipeline from Eaton to Kemerton WWTP.	'Eaton' deleted (no change to km)
Sewage pumping station facility	Australind	Eaton and Australind	'Eaton' deleted
Woodlot: irrigated Tasmanian blue gum (<i>Eucalyptus globulus</i>) plantation	Figure 3	Minimum 60 ha (Lot Nos D36882/3-5, D36635/2 - South of Binningup Road and west of the Old Coast Road)	30 ha (updated to Kemerton woodlot: Lot 310 on Plan 31339, Marriot Road, Wellesley, Western Australia 6233; Figure 1 and Figure 3 updated)
Treated wastewater conveyance pipeline	Northern side of the Sons of Gwalia Haul Road and Rosamel Road between the WWTP site and the Old Coast road, then crossing to the western side of the Old Coast	7.4 km	Removed (no longer required as originally for Binningup woodlot)

Element	Location	Previously Authorised Extent	Authorised Extent
	Road north to the woodlot site.		
On-site storage at Woodlot	-	10 ML	Removed (no longer required as originally for Binningup woodlot)
Operational elements			
WWTP treatment capacity	-	3.6 ML/day	3.6 ML/day
Inflow water quality	-	275 mg/day BOD (unfiltered) 300 mg/L Suspended Solids 70 mg/L Nitrogen 15 mg/L Phosphorus	Removed (n/a)
Treated water quality from WWTP (apart from commissioning)	-	20 mg/L BOD 20 mg/L Suspended Solids 7.5 mg/L N (annual mean) 10 mg/L N (annual 75%-ile) 1.0 mg/L P (annual mean) 1.5 mg/L P (annual 75%-ile)	Removed (treated water quality is otherwise controlled under Part V Licence L7802)

Note: Text in **bold** in Table 2 indicates a change to the proposal.

Table 3: Abbreviations

Abbreviation	Term
BOD	biochemical oxygen demand
ha	hectare
km	kilometre
L	litre
mg	milligram
ML	megalitre
N	nitrogen
P	phosphorous

Figures (attached)

Figure 1 Location of proposal

Figure 2 Kemerton wastewater treatment plant and woodlot title

A handwritten signature in blue ink, appearing to be 'TH', located below the list of figures.

Dr Tom Hatton

CHAIRMAN

Environmental Protection Authority
under delegated authority

Approval date: 1 Oct 2019

Figure 1 – Location of proposal

