



Statement No.

000594

MINISTER FOR THE ENVIRONMENT AND HERITAGE

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**DESALINATED WATER AND SEAWATER SUPPLIES PROJECT
BURRUP PENINSULA, SHIRE OF ROEBOURNE**

Proponent: Water Corporation

Proponent Address: 629 Newcastle Street, Leederville WA 6007

Assessment Number: 1419

Previous Assessment Number: 1378

Previous Statement Number: Statement No. 567 (published on 22 June 2001).

Report of the Environmental Protection Authority: Bulletin 1044

Previous Report of the Environmental Protection Authority: Bulletin 1014

The implementation of this proposal to which the above reports of the Environmental Protection Authority relate is subject to the conditions and procedures contained in Ministerial Statement No. 567 (22 June 2001), as amended by the following:

Condition 2-1 (Proponent Commitments) of Statement No. 567 is deleted and the following condition is inserted:

2 Proponent Commitments

- 2-1 The proponent shall implement the revised consolidated environmental management commitments of 19 March 2002 as documented in schedule 2 of this statement.

Note: The attached schedule 1 is inserted in place of schedule 1 of 22 June 2001.

Dr Judy Edwards MLA

MINISTER FOR THE ENVIRONMENT AND HERITAGE

Published on

- 5 JUN 2002

Schedule 1 (Revised)

The Proposal (Assessment No. 1419)

The proposal is to construct and operate a seawater supply and desalination system to service the requirements of new industrial developments on the Burrup Peninsula, approximately 1,300 kilometres north of Perth (Figure 1).

The proponent proposes to:

- Provide a seawater supply system with a capacity of approximately 280 megalitres per day;
- Provide a brine discharge into King Bay with a capacity of approximately 208 megalitres per day;
- Accept the discharge of treated industrial and domestic wastewater into the brine discharge stream from facilities which have environmental approval; and
- Construct and operate desalination plants on the Syntroleum Sweetwater Pty Ltd lease, the Burrup Fertilisers Pty Ltd lease and potentially other sites.

The pipeline route and location of the seawater inlet and brine outlet are shown in Figure 2 (attached).

The key characteristics of the modified project are summarised in Table 1 below.

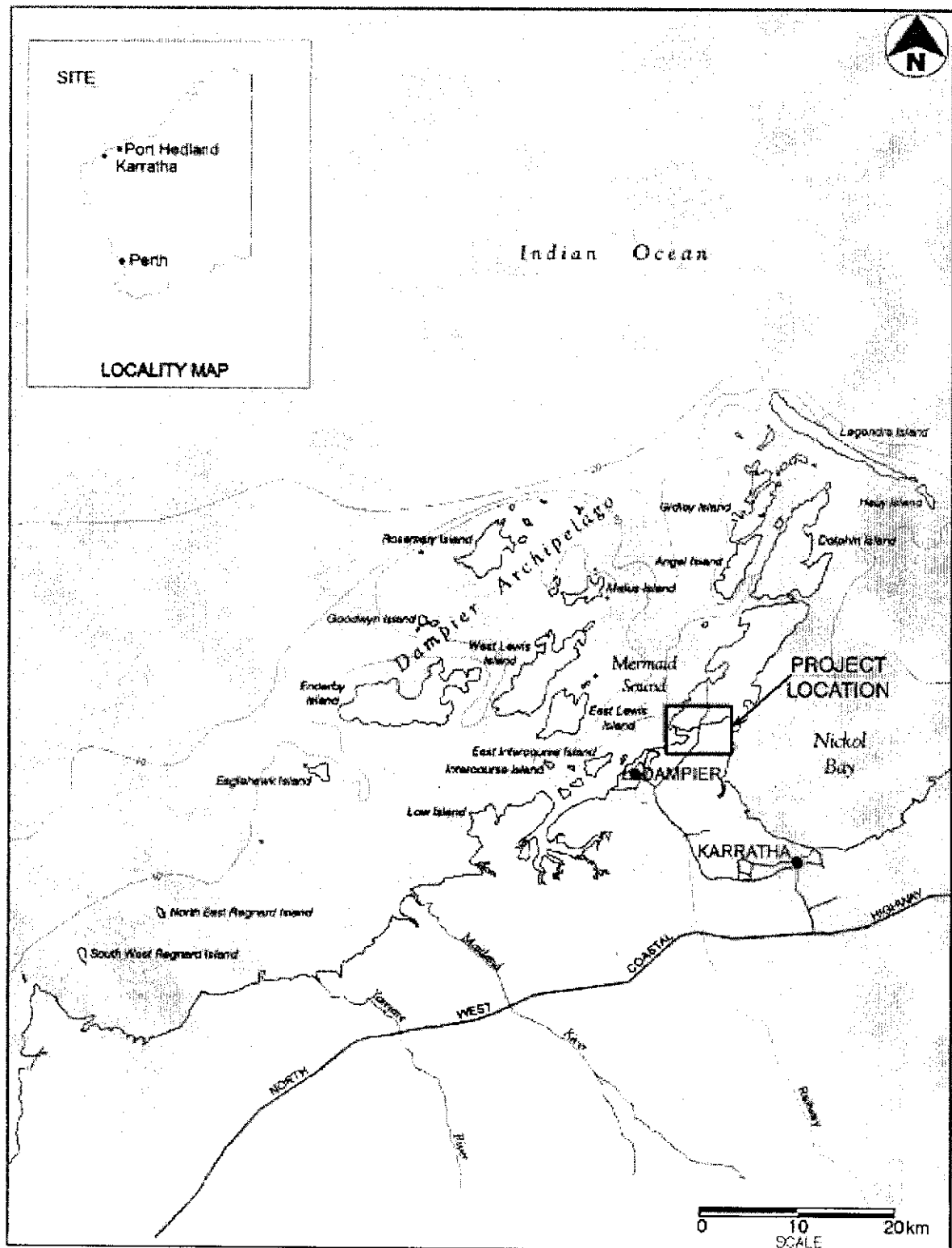


Figure 1. Project Location - Regional Map (Source: Figure 1.2 HLA - Envirosiences, 1999a).

Table 1: Summary of key proposal characteristics (Assessment No. 1419)

Element	Description
Project Purpose	To provide high purity water and seawater to industries on the Burrup Peninsula.
Project Life	25 + years
Major Project Components	• Seawater supply pipelines (to 1.4 metres diameter) • 2 ML Seawater surge tank at the Three Sisters site • Brine discharge pipelines (to 1.1 metres diameter) • 2 ML brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV power line • Thermal desalination plant, including cooling tower, seawater storage tank and desalinated water storage tank at the Syntroleum site • Thermal desalination plant, including seawater storage tank and desalinated water storage tank at the Burrup Fertilisers site • Potentially, future desalination plants and associated infrastructure at other developers' sites
Plant Location	• Seawater intake pump system – within the Mermaid Marine harbour development • Seawater pipelines – within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines – adjacent to seawater pipelines • 33 kV power line – adjacent to seawater and brine pipelines • Syntroleum Desalination plant – within the Syntroleum lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Burrup Fertilisers Desalination plant – within the Burrup Fertilisers lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser – extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum.
Plant Operation	Continuous – 24 hours per day, 365 days per year
Storage Capacities	• Seawater service tank (Three Sisters site) - 2ML • Brine break tank (adjacent Mermaid Marine) - 2 ML • Syntroleum desalination plant seawater storage tank – 2 ML • Syntroleum desalination plant distilled water storage tank – 4 ML • Burrup Fertilisers desalination plant seawater storage tank – 2 ML • Future tanks at other developers' sites
Inputs: - Seawater - Power Supply	Ultimately, 280 ML/d intake (including process cooling water) • Pump station – ultimately, approximately 3 MW, supplied from process plants • Syntroleum Desalination Plant – approximately 1.5 MW supplied from Syntroleum • Burrup Fertilisers Desalination Plant – approximately 3 MW supplied from Burrup Fertilisers • Potentially, other desalination plants at other developers' sites

Element	Description
Discharges: - Brine - Process wastewater - Domestic wastewater - Antiscalant - Biocide - Sulphamic Acid - Temperature - Heat Load	Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids Burrup Fertilisers – 0.8 ML/d Potentially, similar quantities from other developers' sites. Burrup Fertilisers – 0.04 ML/d Potentially, similar quantities from other developers' sites. Syntroleum desalination plant - 100 kg/d Burrup Fertilisers desalination plant – 100 kg/d Potentially, similar quantities from other developers' sites. Nil; decomposed by addition of sodium metabisulphite. Nil. Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature. Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature.
Noise: - Construction: - Operation:	Less than 30 dB(A) at the nearest permanent residence (Dampier) - Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. - Syntroleum Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Burrup Fertilisers Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).
Construction Period	Approximately 20 months
Construction Workforce	Peak 50
Operational Workforce	Estimated 6
Project Benefit	Provides a reliable, cost effective and environmentally sensitive water supply for industry development on the Burrup Peninsula.

Abbreviations

kg/d = kilograms per day
kV = kilovolts
mg/L = milligrams per litre
ML = Megalitres
ML/d = Megalitres per day
MW = Megawatts

Figures (attached)

Figure 1 - Project location.

Figure 2 - Pipeline route.

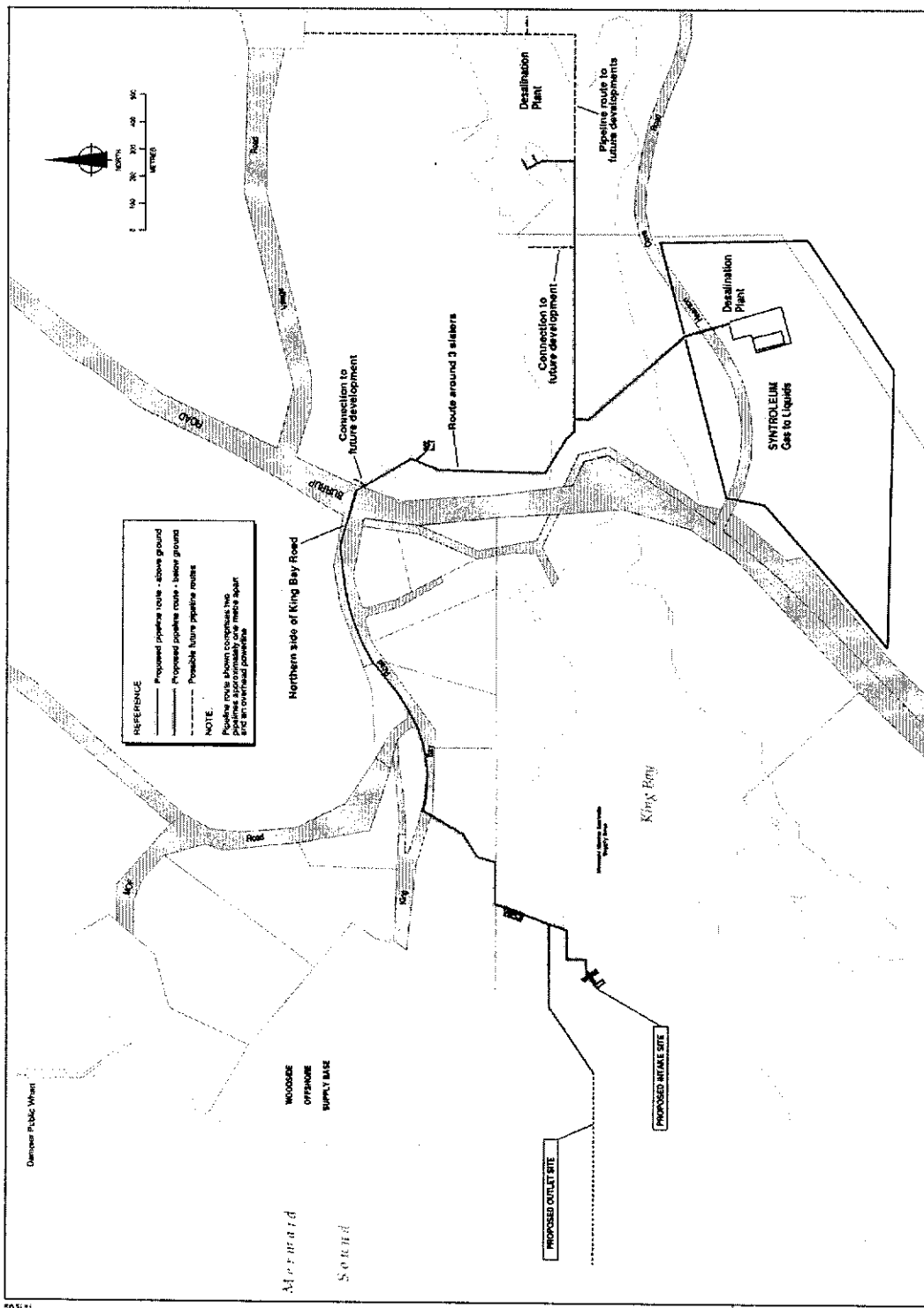


Figure 2: Pipeline Route (Source: Burns & Roe Worley)

**Proponent's Revised Consolidated Environmental
Management Commitments**

19 March 2002

**DESALINATED WATER AND SEAWATER
SUPPLIES PROJECT
BURRUP PENINSULA, SHIRE OF ROEBOURNE
(Assessment No. 1419)**

WATER CORPORATION

DESALINATED WATER & SEAWATER SUPPLIES PROJECT

PROPOSER'S ENVIRONMENTAL MANAGEMENT COMMITMENTS (Assessment No. 1419)

No	Topic	Action	Objective	Timing	Advice
1	Terrestrial Flora	1) Prepare a weed management plan. 2) Implement the plan.	To prevent the introduction of new weeds. To control existing weeds.	Pre-construction Construction	CALM DOA (for noxious weeds)
2	Terrestrial Flora	Conduct a detailed vegetation survey along the pipeline route (including the Three Sisters surge tank), in the appropriate season.	To identify and protect sensitive flora.	Pre-construction	CALM
3	Terrestrial Flora	1) Prepare a flora and vegetation plan: - to quantify area of vegetation to be disturbed and the values that would be lost; and - to set measures to protect significant flora and vegetation. 2) Implement the plan.	To protect significant, rare and endangered flora. To protect significant vegetation assemblages.	Pre-construction Construction	CALM
4	Terrestrial Flora	1) Prepare a rehabilitation management plan for the construction and laydown areas: - to rehabilitate disturbed areas; and - to monitor vegetation assemblages. 2) Implement the plan.	To measure and report on rehabilitation success.	Construction Annually for 5 years, then biannually for a further 10 years.	CALM
5	Terrestrial Fauna	Construct suitable fauna passages beneath the above ground sections of the pipelines.	To protect significant fauna habitats and their access. To protect rare and endangered fauna.	Construction	CALM

No	Topic	Action	Objective	Timing	Advice
6	Marine Environmental Values	Brine and wastewater effluent will only be accepted from industrial process plants: 1) for which licence and/or Ministerial Conditions (Part IV and V of the Environmental Protection Act) have been issued; 2) that have provided appropriate toxicity and environmental fate data for all components of the effluent to the satisfaction of the DEP/EPA; and 3) which only utilise DEP/EPA approved process additives (eg antiscalants, corrosion inhibitors etc).	To minimise impacts on the marine environment.	On-going On-going	DEP/EPA CALM
7	Marine Environmental Values	Continue to review options for recycling and reuse of brine and/or wastewater effluent (including the Dampier Salt option). The infrastructure will be designed and constructed such that future reuse / recycling opportunities can be accommodated.	To minimise impacts on the marine and general environment.	On-going	OMP DEP/EPA
8	Marine Environmental Values	1) Prepare an Environmental Management Plan in consultation with the system users and the DEP/EPA. The plan will encompass: • requirements for monitoring (of effluent, seawater, sediments and biota); • requirements for independent data verification, evaluation and reporting; and • mechanisms for joint management of the system by the proponent and system users. 2) Implement the plan.	To minimise impacts on the value of the marine environment.	Pre-commissioning On-going	DEP/EPA CALM

No	Topic	Action	Objective	Timing	Advice
9	Marine Flora and Fauna	Conduct a survey of the seabed to identify the marine habitats and benthic flora and fauna around the revised diffuser location.	To protect benthic flora and fauna.	Pre-construction	CALM WA Museum
10	Marine Flora and Fauna	1) Prepare a dredging and spoil disposal plan that incorporates the best practically available dredging construction methods and techniques: • to minimise generation of turbidity; • to minimise redistribution of contaminants; • to minimise visual impacts; and • to ensure seawater oxygen levels are not depleted. 2) Implement the plan.	To protect and minimise the extent of disturbance of benthic flora and fauna.	Pre-construction Construction	DPA DEP/EPA CALM
11	Marine Flora and Fauna	In accordance with the Environmental Management Plan, monitor emissions at the outfall break tank: • Continuous on-line monitoring will include at least flow rate, temperature, pH, conductivity, oxidation-reduction potential, ammonia and turbidity; • Other contaminants that can be reasonably and reliably monitored by on-line instrumentation will also be monitored; and • Appropriate additional monitoring will be conducted to quantify discharge levels of dissolved oxygen, nutrients, process additives and other environmental contaminants (such as heavy metals) in consultation with the DEP/EPA.	To protect sessile flora and fauna.	Pre-commissioning	DEP/EPA

No	Topic	Action	Objective	Timing	Advice
12	Marine Flora and Fauna	1) Brine emissions from Water Corporation desalination facilities will be controlled to the following: • Effluent discharge temperature to be less than 2° C* above the inlet seawater temperature for 80% of the time and not exceeding a maximum limit of 5° C above, unless otherwise agreed with the DEP; • The concentration of oxidising biocide in the effluent discharge to be less than 0.1 mg/L; and • The concentration of antiscalant in the effluent discharge to be less than 2 mg/L, unless otherwise agreed with the DEP. 2) The proponent, in conjunction with system users, will manage the total effluent discharge to meet the above criteria.	To protect sessile flora and fauna.	Operation	DEP/EPA
13	Marine Flora and Fauna	In accordance with the Environmental Management Plan, monitor contaminants in the seawater, sediment and biota, that includes the monitoring of caged "sentinel" organisms around the brine outfall.	To establish baseline data for the concentrations of heavy metals, process chemicals and other relevant contaminants. To identify long term effects on biota. To protect sessile flora and fauna.	Pre-commissioning On-going	DEP/EPA CALM
14	Marine Flora and Fauna	In accordance with the Environmental Management Plan, monitor seawater temperature at: • the intake and outfall; • appropriate locations between the outfall and the nearest coral community; and • appropriate reference locations.	To ensure no adverse impacts on coral communities particularly the nearest corals to the discharge diffuser. To verify the dispersion modelling results. To interpret the results of any coral monitoring program.	On-going. (December to April, following commissioning of each additional plant).	DEP/EPA CALM

No	Topic	Action	Objective	Timing	Advice
15	Visual Amenity	1) Prepare a Visual Amenity Plan that includes: • Mounding of excess soil and rock to form a visual screen where practicable; • Painting pipelines in colours that blend with the environment; and • No construction of a pipeline maintenance access road, unless otherwise agreed with the DEP. 2) Implement the plan.	To provide a visual screen of the pipelines from Burrup Road. To prevent unacceptable visual impacts.	Pre-construction Construction	DEP/EPA
16	Aboriginal Heritage	1) Prepare an Aboriginal Heritage Plan to: • identify all sites of cultural significance; • provide guidelines for avoidance of and behaviour around sites; and • provide guidelines if artifacts are found. 2) Implement the plan.	To minimise disturbance to sites of cultural significance.	Pre-construction Construction	DIA
17	Risk	Desalination plant design and operation to be compatible with the Safety Report and Emergency Plan of the adjacent process plant (as required by the Worksafe National Standard for the Control of Major Hazard Facilities).	To ensure safe operation in proximity to a major hazard facility.	Design compliance - pre-construction. Operation compliance - prior to operation of the plant.	MPR

*The difference between the 24 hour average seawater intake temperature and the brine discharge temperature.

CALM = Department of Conservation and Land Management
 DEP = Department of Environmental Protection
 DIA = Department of Indigenous Affairs
 DOA = Department of Agriculture
 DPA = Damper Port Authority
 EPA = Environmental Protection Authority
 MPR = Department of Mineral and Petroleum Resources
 OMP = Office of Major Projects

Attachment 1 to Statement 594

Change to Proposal

Proposal: Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne

Proponent: Water Corporation

Change: Construct and operate alternative seawater intake pump station

Key Characteristics Table:

Element	Description of proposal	Description of approved change to proposal
Project Purpose	To provide high purity water and seawater to industries on the Burrup Peninsula	To provide high purity water and seawater to industries on the Burrup Peninsula
Project Life	25 + years	25 + years
Major Project Components	• Seawater supply pipelines (to 1.4 metres diameter) • 2 ML Seawater surge tank at the Three Sisters site • Brine discharge pipelines (to 1.1 metres diameter) • 2 ML brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Thermal desalination plant, including cooling tower, seawater storage tank and desalinated water storage tank at the Syntroleurn site • Thermal desalination plant, including seawater storage tank and desalinated water storage tank at the Burrup Fertilisers site • Potentially, future desalination plants and associated infrastructure at other developers' sites	• Seawater supply pipelines (to 1.4 metres diameter) • 2 ML Seawater surge tank at the Three Sisters site • Brine discharge pipelines (to 1.1 metres diameter) • 2 ML brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Thermal desalination plant, including cooling tower, seawater storage tank and desalinated water storage tank at the Syntroleurn site • Thermal desalination plant, including seawater storage tank and desalinated water storage tank at the Burrup Fertilisers site • Potentially, future desalination plants and associated infrastructure at other developers' sites
Plant location	• Seawater intake pump station – within the Mermaid Marine harbour development	• Seawater intake pump stations – within the Mermaid Marine harbour development

Element	Description of proposal	Description of approved change to proposal
Plant location continued	• Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Syntroleum Desalination plant - within the Syntroleum lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Burrup Fertilisers Desalination plant - within the Burrup Fertilisers lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum	• Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Syntroleum Desalination plant - within the Syntroleum lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Burrup Fertilisers Desalination plant - within the Burrup Fertilisers lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum
Plant Operation	Continuous – 24 hours per day, 365 days per year	Continuous – 24 hours per day, 365 days per year
Storage Capacities	• Seawater service tank (Three Sisters site) - 2ML • Brine break tank (adjacent Mermaid Marine) - 2 ML • Syntroleum desalination plant seawater storage tank - 2 ML • Syntroleum desalination plant distilled water storage tank - 4 ML • Burrup Fertilisers desalination plant seawater storage tank - 2 ML • Future tanks at other developers' sites	• Seawater service tank (Three Sisters site) - 2ML • Brine break tank (adjacent Mermaid Marine) - 2 ML • Syntroleum desalination plant seawater storage tank - 2 ML • Syntroleum desalination plant distilled water storage tank - 4 ML • Burrup Fertilisers desalination plant seawater storage tank - 2 ML • Future tanks at other developers' sites

Element	Description of proposal	Description of approved change to proposal
Inputs: Seawater	Ultimately, 280 ML/d intake (including process cooling water)	Ultimately, 280 ML/d intake (including process cooling water)
Power Supply	• Pump station - ultimately, approximately 3 MW, supplied from process plants • Syntroleum Desalination Plant - approximately t.5 MW supplied from Syntroleum • Burrup Fertilisers Desalination Plant - approximately 3 MW supplied from Burrup Fertilisers • Potentially, other desalination plants at other developers' sites	• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Syntroleum Desalination Plant - approximately t.5 MW supplied from Syntroleum • Burrup Fertilisers Desalination Plant - approximately 3 MW supplied from Burrup Fertiliser • Potentially, other desalination plants at other developers' sites
Discharges: • Brine • Process Wastewater • Domestic Wastewater • Antiscalant • Biocide • Sulphamic Acid • Temperature • Heat Load	Ultimately, approximately 208 MUD at up to 55,000 mg/L Total Dissolved Solids Burrup Fertilisers - 0.8 MUD Potentially similar quantities from other developers' sites. Burrup Fertilisers - 0,04 MUD Potentially, similar quantities from other developers' sites. Syntroleum desalination plant - 100 kg/d Burrup Fertilisers desalination plant - 100 kg/d Potentially similar quantities from other developers' sites. Nil; decomposed by addition of sodium metabisulphite. Nil. Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature. Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature.	Ultimately, approximately 208 MUD at up to 55,000 mg/L Total Dissolved Solids Burrup Fertilisers - 0.8 MUD Potentially similar quantities from other developers' sites. Burrup Fertilisers - 0,04 MUD Potentially, similar quantities from other developers' sites. Syntroleum desalination plant - 100 kg/d Burrup Fertilisers desalination plant - 100 kg/d Potentially similar quantities from other developers' sites. Nil; decomposed by addition of sodium metabisulphite. Nil. Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature. Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature.

Element	Description of proposal	Description of approved change to proposal
Noise: Construction	Less than 30 dB(A) at the nearest permanent residence (Dampier)	Less than 30 dB(A) at the nearest permanent residence (Dampier)
Operation	- Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. - Syntroleum Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Burrup Fertilisers Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).	- Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. - Syntroleum Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Burrup Fertilisers Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).
Construction Period	Approximately 20 months	Approximately 12 months
Construction Workforce	Peak 50	Workforce number to be removed as not environmentally relevant
Operational Workforce	Estimated 6	Workforce number to be removed as not environmentally relevant
Project Benefit	Provides a reliable, cost effective and environmentally sensitive water supply for industry development on the Burrup Peninsula.	Provides a reliable, cost effective and environmentally sensitive water supply for industry development on the Burrup Peninsula.

List of Figures:

Figure 1: Location of Proposed Alternate Pump Station

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 5.3.10

Water Corporation Seawater Intake Pipeline and Pump Stations



FIG. 1

Attachment 2 to Statement 594

Change to Proposal

Proposal: Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne

Proponent: Water Corporation

Change: Construct and operate a six gigalitre per annum reverse osmosis desalination plant to supply industry and domestic customers.

Key Characteristics Table:

Element	Description of proposal	Description of approved change to proposal
Project Purpose	To provide high purity water and seawater to industries on the Burrup Peninsula	To provide high purity water and seawater to industry and domestic customers
Project Life	25 + years	25 + years
Major Project Components	• Seawater supply pipelines (to 1.4 metres diameter) • 2 ML Seawater surge tank at the Three Sisters site • Brine discharge pipelines (to 1.1 metres diameter) • 2 ML brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Thermal desalination plant, including cooling tower, seawater storage tank and desalinated water storage tank at the Syntroleum site • Thermal desalination plant, including seawater storage tank and desalinated water storage tank at the Burrup Fertilisers site • Potentially, future desalination plants and associated infrastructure at other developers' sites	• Seawater supply pipelines • Seawater surge tank at the Three Sisters site • Brine discharge pipelines • Brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Desalination plants (utilising thermal or reverse osmosis technology) including cooling towers, seawater storage tanks and desalinated water storage tanks (as appropriate) • Removed (see dot point above) • Potentially, future desalination plants and associated infrastructure at other developers' sites
Plant location	• Seawater intake pump stations – within the Mermaid Marine harbour development	• Seawater intake pump stations – within the Mermaid Marine harbour development

Element	Description of proposal	Description of approved change to proposal
Plant location continued	• Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Syntroleum Desalination plant - within the Syntroleum lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Burrup Fertilisers Desalination plant - within the Burrup Fertilisers lease area, adjacent to the process plant site, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum	• Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Water Corporation Desalination plants located on land leased to Water Corporation and Burrup Fertilisers, King Bay-Hearson Cove Industrial Area • Removed (see dot point above) • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum
Plant Operation	Continuous – 24 hours per day, 365 days per year	Continuous – 24 hours per day, 365 days per year
Storage Capacities	• Seawater service tank (Three Sisters site) - 2ML • Brine break tank (adjacent Mermaid Marine) - 2 ML • Syntroleum desalination plant seawater storage tank - 2 ML • Syntroleum desalination plant distilled water storage tank - 4 ML • Burrup Fertilisers desalination plant seawater storage tank - 2 ML • Future tanks at other developers' sites	• Seawater service tanks • Brine break tanks • Syntroleum desalination plant seawater storage tanks • Distilled water and potable storage tanks • Removed (see dot point above) • Future tanks at other developers' sites

Element	Description of proposal	Description of approved change to proposal
Inputs: Seawater	Ultimately, 280 ML/d intake (including process cooling water)	Ultimately, 280 ML/d intake (including process cooling water)
Power Supply	• Pump station - ultimately, approximately 3 MW, supplied from process plants • Syntroleum Desalination Plant - approximately 1.5 MW supplied from Syntroleum • Burrup Fertilisers Desalination Plant - approximately 3 MW supplied from Burrup Fertilisers • Potentially, other desalination plants at other developers' sites	• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Water Corporation Desalination Plant located on Water Corporation leased land - approximately 5.3 MW supplied from Horizon Power • Water Corporation Desalination Plant located on land leased to Burrup Fertilisers - approximately 3 MW supplied from Burrup Fertiliser • Potentially, other desalination plants at other developers' sites
Discharges: • Brine • Process Wastewater • Domestic Wastewater • Antiscalant • Biocide • Sulphamic Acid • Temperature • Heat Load	Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids Burrup Fertilisers - 0.8 ML/d Potentially similar quantities from other developers' sites. Burrup Fertilisers – 0.04 ML/d Potentially, similar quantities from other developers' sites. Syntroleum desalination plant – 100 kg/d Burrup Fertilisers desalination plant - 100 kg/d Potentially similar quantities from other developers' sites. Nil; decomposed by addition of sodium metabisulphite. Nil. Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature. Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature.	Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids Approximately 0.8 ML/d of process wastewater from industries on the Burrup Removed (see above) Approximately 0.04 ML/d of domestic wastewater from industries on the Burrup Removed (see above) Approximately 100 kg/d per desalination plant Removed (see above) Removed (see above) Nil; decomposed by addition of sodium metabisulphite. Nil. Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature. Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature.

Element	Description of proposal	Description of approved change to proposal
Noise: Construction	Less than 30 dB(A) at the nearest permanent residence (Dampier)	Less than 30 dB(A) at the nearest permanent residence (Dampier)
Operation	- Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. - Syntroleum Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Burrup Fertilisers Desalination plant: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).	- Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. Water Corporation Desalination plants: Less than 30 dB(A) at the nearest permanent residence (Dampier). Remove (see dot point above) - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).
Construction Period	Approximately 12 months	Approximately 18 months
Construction Workforce	Peak 50	Removed
Operational Workforce	Estimated 6	Removed
Project Benefit	Provides a reliable, cost effective and environmentally sensitive water supply for industry development on the Burrup Peninsula.	Provides a reliable, cost effective and environmentally sensitive water supply for industrial and domestic use.

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority

Approval date: 6 August 2010

Attachment 3 to Ministerial Statement 594

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

This Attachment replaces Attachment 2 of Ministerial Statement 594

Proposal: Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne

Proponent: Water Corporation

Changes:

- Define the development envelope using spatial coordinates (Replace Figure 2 of MS 594 with defined development envelope in schedule 3 (new))
- Increase development envelope by 1.44 ha, from 17.96 to 19.40 ha
- Increase in clearing by 0.26 ha, from 6.36 to 6.62 ha
- Delete in Table 2 the element Operational Noise, and description: Seawater intake system: "less than 70 dB(A) at 1 metre from pump well".

Table 1: Summary of the proposal

Proposal title	Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne
Short description	The proposal is to construct and operate a seawater supply and desalination system to service the requirements of new industrial developments on the Burrup Peninsula, approximately 1,300 kilometres north of Perth.

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

Element	Location	Previously authorised extent	Authorised extent
Project Purpose		To provide high purity water and seawater to industry and domestic customers	To provide high purity water and seawater to industry and domestic customers
Development envelope and disturbance footprint	Figure 1	NA (not previously defined)	Total disturbance footprint of up to 6.62 ha within the 19.40 ha development envelope
Project Life		25 + years	25 + years
Major Project Components		• Seawater supply pipelines • Seawater surge tank at the Three Sisters site	• Seawater supply pipelines • Seawater surge tank at the Three Sisters site • Brine discharge pipelines

Element	Location	Previously authorised extent	Authorised extent
		• Brine discharge pipelines • Brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Desalination plants (utilising thermal or reverse osmosis technology) including cooling towers, seawater storage tanks and desalinated water storage tanks (as appropriate) • Potentially, future desalination plants and associated infrastructure at other developers' sites	• Brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Desalination plants (utilising thermal or reverse osmosis technology) including cooling towers, seawater storage tanks and desalinated water storage tanks (as appropriate) • Potentially, future desalination plants and associated infrastructure at other developers' sites
Plant location		• Seawater intake pump stations – within the Mermaid Marine harbour development • Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Water Corporation Desalination plants located on land leased to Water Corporation and Burrup	• Seawater intake pump stations – within the Mermaid Marine harbour development • Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Water Corporation Desalination plants located on land leased to Water Corporation and Burrup Fertilisers, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser -

Element	Location	Previously authorised extent	Authorised extent
		Fertilisers, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum	extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum
Plant Operation		Continuous – 24 hours per day, 365 days per year	Continuous – 24 hours per day, 365 days per year
Storage Capacities		• Seawater service tanks • Brine break tanks • Syntroleum desalination plant seawater storage tanks • Distilled water and potable storage tanks • Future tanks at other developers' sites	• Seawater service tanks • Brine break tanks • Syntroleum desalination plant seawater storage tanks • Distilled water and potable storage tanks • Future tanks at other developers' sites
Inputs: Seawater		Ultimately, 280 ML/d intake (including process cooling water)	Ultimately, 280 ML/d intake (including process cooling water)
Power Supply		• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Water Corporation Desalination Plant located on Water Corporation leased land - approximately 5.3 MW supplied from Horizon Power • Water Corporation Desalination Plant located on land leased to	• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Water Corporation Desalination Plant located on Water Corporation leased land -approximately 5.3 MW supplied from Horizon Power • Water Corporation Desalination Plant located on land leased to Burrup Fertilisers - approximately 3 MW

Element	Location	Previously authorised extent	Authorised extent
		Burrup Fertilisers - approximately 3 MW supplied from Burrup Fertiliser • Potentially, other desalination plants at other developers' sites	supplied from Burrup Fertiliser • Potentially, other desalination plants at other developers' sites
Discharges: • Brine • Process Wastewater • Domestic Wastewater • Antiscalant • Biocide • Sulphamic Acid • Temperature • Heat Load		• Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids • Approximately 0.8 ML/d of process wastewater from industries on the Burrup • Approximately 0.04 ML/d of domestic wastewater from industries on the Burrup • Approximately 100 kg/d per desalination plant • Nil; decomposed by addition of sodium metabisulphite. • Nil • Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature • Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature	• Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids • Approximately 0.8 ML/d of process wastewater from industries on the Burrup • Approximately 0.04 ML/d of domestic wastewater from industries on the Burrup • Approximately 100 kg/d per desalination plant • Nil; decomposed by addition of sodium metabisulphite. • Nil • Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature • Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature
Noise: • Construction • Operation		• Less than 30 dB(A) at the nearest permanent residence (Dampier) • Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. • Water Corporation Desalination plants: Less than 30 dB(A) at the	• Less than 30 dB(A) at the nearest permanent residence (Dampier) • Seawater intake system: Less than 70 dB(A) at 1 metre from pump well. • Water Corporation Desalination plants: Less than 30 dB(A) at the nearest

Element	Location	Previously authorised extent	Authorised extent
		nearest permanent residence (Dampier). • Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).	permanent residence (Dampier). • Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).
Construction Period		Approximately 18 months	Approximately 18 months
Project Benefit		Provides a reliable, cost effective and environmentally sensitive water supply for industrial and domestic use.	Provides a reliable, cost effective and environmentally sensitive water supply for industrial and domestic use.

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

Table 3: Abbreviations

Abbreviation	Term
CEO	Chief Executive Officer
GL	gigalitre
ha	hectare
km	kilometre

Figures (attached)

Figure 1: Desalinated Water and Seawater Supplies Burrup Peninsula Development Envelope and disturbance footprint. (This replaces Figure 2 of MS 594)

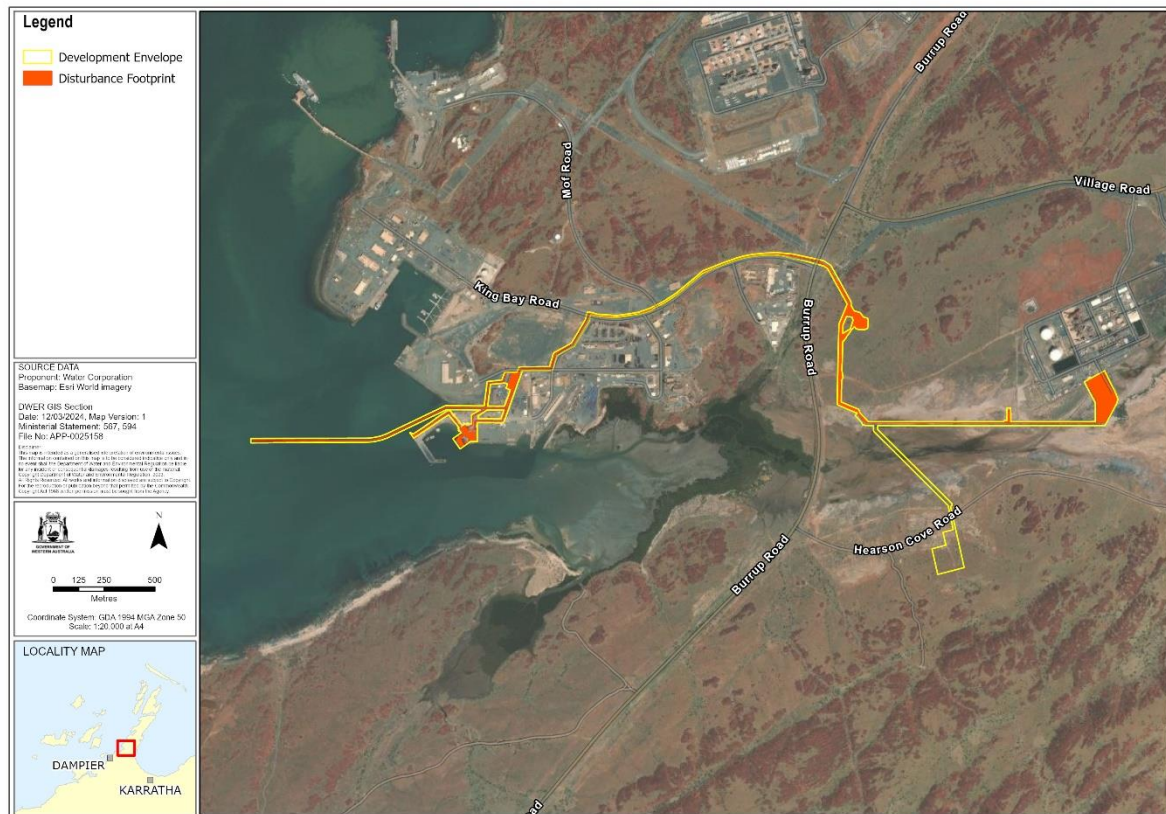


Figure 1: Desalinated Water and Seawater Supplies Burrup Peninsula Development Envelope and disturbance footprint.

Schedule 3 (NEW)

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geocentric Datum of Australia 2020 (GDA2020).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation Environment Online (APP-0025158)

Signed 19 April 2024

Prof Matthew Tonts

CHAIR

Environmental Protection Authority
under delegated authority

Attachment 4 to Ministerial Statement 594
Amendment to proposal approved under section 45C of the
Environmental Protection Act 1986

This Attachment replaces Attachment 3 of Ministerial Statement 594

Proposal: Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne

Proponent: Water Corporation

Changes:

- Increase the development envelope from 19.40 ha to 19.63
- Increase the disturbance footprint from 8.23 ha to 8.65 ha

Table 1: Summary of the proposal

Proposal title	Desalinated Water and Seawater Supplies Project Burrup Peninsula, Shire of Roebourne
Short description	The proposal is to construct and operate a seawater supply and desalination system to service the requirements of new industrial developments on the Burrup Peninsula, approximately 1,300 kilometres north of Perth.

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

Element	Location	Previously authorised extent	Authorised extent
Project Purpose		To provide high purity water and seawater to industry and domestic customers	To provide high purity water and seawater to industry and domestic customers
Development envelope and disturbance footprint	Figure 1	Total disturbance footprint of up to 6.62 ha within the 19.40 ha development envelope	Total disturbance footprint of up to 8.65 ha within the 19.63 ha development envelope
Project Life		25 + years	25 + years
Major Project Components		• Seawater supply pipelines • Seawater surge tank at the Three Sisters site • Brine discharge pipelines	• Seawater supply pipelines • Seawater surge tank at the Three Sisters site • Brine discharge pipelines

Element	Location	Previously authorised extent	Authorised extent
		• Brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Desalination plants (utilising thermal or reverse osmosis technology) including cooling towers, seawater storage tanks and desalinated water storage tanks (as appropriate) • Potentially, future desalination plants and associated infrastructure at other developers' sites	• Brine break tank adjacent to Mermaid Marine, outfall pipe and diffuser array into King Bay • 33 kV powerline • Desalination plants (utilising thermal or reverse osmosis technology) including cooling towers, seawater storage tanks and desalinated water storage tanks (as appropriate) • Potentially, future desalination plants and associated infrastructure at other developers' sites
Plant location		• Seawater intake pump stations – within the Mermaid Marine harbour development • Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Water Corporation Desalination plants	• Seawater intake pump stations – within the Mermaid Marine harbour development • Seawater pipelines - within easements on the northern side of the mudflat north of Hearson Cove Road, eastern side of Burrup Road, northern side of King Bay Road and western side of the Mermaid Marine access road and property • Brine pipelines - adjacent to seawater pipelines • 33 kV power line - adjacent to seawater and brine pipelines • Water Corporation Desalination plants

Element	Location	Previously authorised extent	Authorised extent
		located on land leased to Water Corporation and Burrup Fertilisers, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum	located on land leased to Water Corporation and Burrup Fertilisers, King Bay-Hearson Cove Industrial Area • Brine outfall and diffuser - extending approximately 800 metres from the end of the Mermaid Marine groyne to a point approximately midway between the Mermaid Marine and Woodside shipping channels at 4.0 metres Chart Datum
Plant Operation		Continuous – 24 hours per day, 365 days per year	Continuous – 24 hours per day, 365 days per year
Storage Capacities		• Seawater service tanks • Brine break tanks • Syntroleum desalination plant seawater storage tanks • Distilled water and potable storage tanks • Future tanks at other developers' sites	• Seawater service tanks • Brine break tanks • Syntroleum desalination plant seawater storage tanks • Distilled water and potable storage tanks • Future tanks at other developers' sites
Inputs Seawater		Ultimately, 280 ML/d intake (including process cooling water)	Ultimately, 280 ML/d intake (including process cooling water)
Power Supply		• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Water Corporation Desalination Plant located on Water Corporation leased land -approximately 5.3	• Pump stations - ultimately, approximately 3 MW, supplied from process plants • Water Corporation Desalination Plant located on Water Corporation leased land -approximately 5.3

Element	Location	Previously authorised extent	Authorised extent
		MW supplied from Horizon Power - Water Corporation Desalination Plant located on land leased to Burrup Fertilisers - approximately 3 MW supplied from Burrup Fertiliser - Potentially, other desalination plants at other developers' sites	MW supplied from Horizon Power - Water Corporation Desalination Plant located on land leased to Burrup Fertilisers - approximately 3 MW supplied from Burrup Fertiliser - Potentially, other desalination plants at other developers' sites
Discharges: - Brine - Process Wastewater - Domestic Wastewater - Anti-scalant - Biocide - Sulphamic Acid - Temperature		- Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids - Approximately 0.8 ML/d of process wastewater from industries on the Burrup - Approximately 0.04 ML/d of domestic wastewater from industries on the Burrup - Approximately 100 kg/d per desalination plant - Nil; decomposed by addition of sodium metabisulphite. - Nil - Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature	- Ultimately, approximately 208 ML/d at up to 55,000 mg/L Total Dissolved Solids - Approximately 0.8 ML/d of process wastewater from industries on the Burrup - Approximately 0.04 ML/d of domestic wastewater from industries on the Burrup - Approximately 100 kg/d per desalination plant - Nil; decomposed by addition of sodium metabisulphite. - Nil - Discharge less than 5°C (less than 2°C for 80% of the time) above ambient seawater temperature

Element	Location	Previously authorised extent	Authorised extent
Heat Load		Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature	Ultimately, approximately 208 ML/d nominally within 2°C of the ambient seawater temperature
Noise: - Construction - Operation		- Less than 30 dB(A) at the nearest permanent residence (Dampier) - Water Corporation Desalination plants: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).	- Less than 30 dB(A) at the nearest permanent residence (Dampier) - Water Corporation Desalination plants: Less than 30 dB(A) at the nearest permanent residence (Dampier). - Future desalination plants at other developers' sites are likely to be very similar in nature and sound level at Dampier will be less than 30 dB(A).
Construction Period		Approximately 18 months	Approximately 18 months
Project Benefit		Provides a reliable, cost effective and environmentally sensitive water supply for industrial and domestic use.	Provides a reliable, cost effective and environmentally sensitive water supply for industrial and domestic use.

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

Table 3: Abbreviations

Abbreviation	Term
°C	degrees Celsius
CEO	Chief Executive Officer
dB(A)	sound level
GL	gigalitre
ha	hectare
kg/d	kilogram per day

Abbreviation	Term
km	kilometre
kV	kilovolt
mg/L	milligram per litre
ML/d	megalitre per day
MW	megawatt

Figures (attached)

Figure 1: Desalinated Water and Seawater Supplies Burrup Peninsula Development Envelope and disturbance footprint (this figure is a representation of the coordinates referenced in Schedule 3).



Darren Walsh

CHAIR

Environmental Protection Authority
under delegated authority

Approval date: 25 August 2025

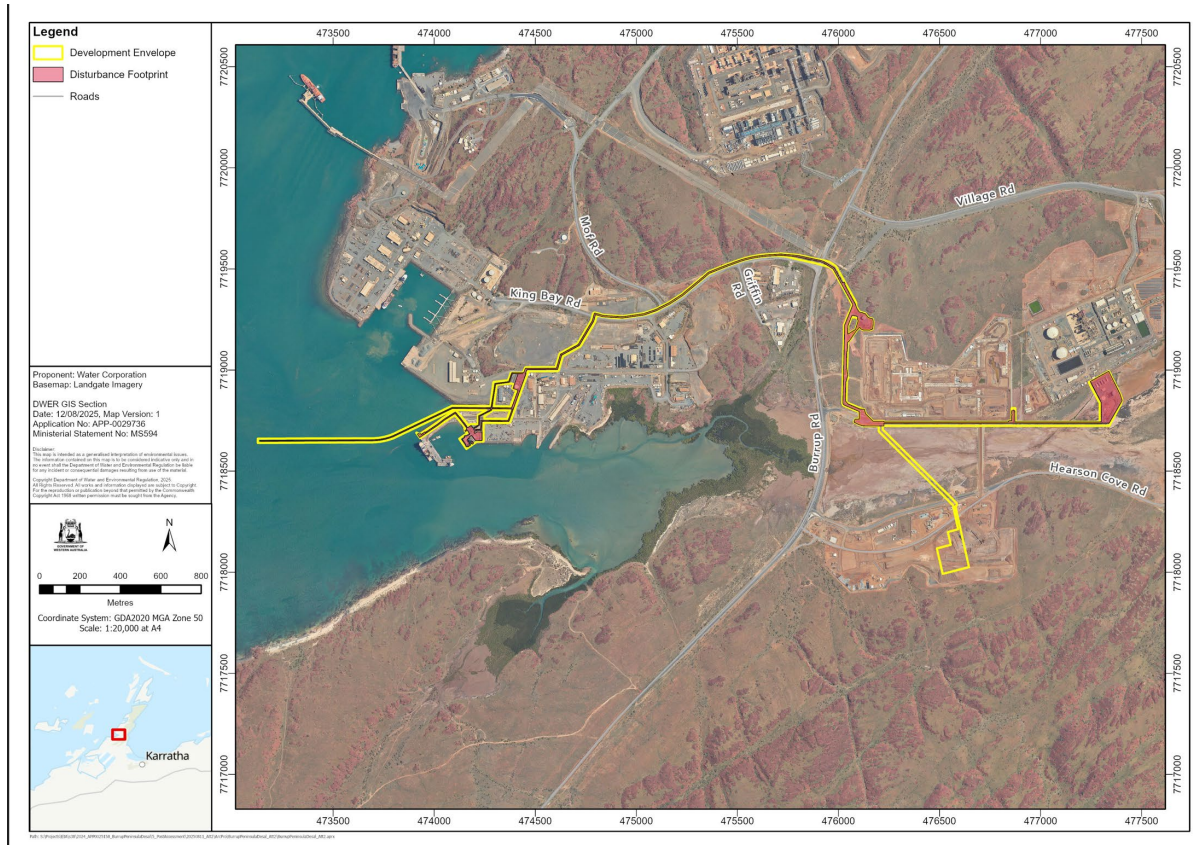


Figure 1: Desalinated Water and Seawater Supplies Burrup Peninsula development envelope and disturbance footprint.

Schedule 3

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geocentric Datum of Australia 2020 (GDA2020).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation Environment Online (APP-0029736)