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Published on: 10 August 2023

Statement No. 1207

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED**  
***(Environmental Protection Act 1986)***

**ALKIMOS SEAWATER DESALINATION PLANT**

**Proposal:**

The construction and operation of a 100 GL per annum seawater desalination plant and a 6 GL per annum groundwater treatment plant at the Alkimos water precinct. The source water for the desalination process will be delivered through the construction of a pipeline directly west of the proposed seawater desalination plant.

By-products of the desalination process will be returned further offshore to the marine environment through a separate pipeline.

In order to distribute the drinking water into Perth's Integrated Water Supply Scheme, the project includes a 32.93 kilometre pipeline from the Alkimos site to the Wanneroo Reservoir, and other significant distribution points along the pipe route.

**Proponent:**

Water Corporation

Australian Business Number 28 003 434 917

**Proponent address:**

629 Newcastle Street  
Leederville WA 6007

**Assessment number:** 2210

**Report of the Environmental Protection Authority:** 1739

**Introduction:** Pursuant to section 45 of the *Environmental Protection Act 1986*, it has been agreed that the proposal entitled Alkimos Seawater Desalination Plant described in the 'Proposal Content Document', as amended by the change to proposal approved under s. 43A on 7 March 2023, may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

## Conditions and procedures:

### Part A: Proposal extent

### Part B: Environmental outcomes, prescriptions, and objectives

### Part C: Environmental management plans and monitoring

### Part D: Compliance and other conditions

## PART A: PROPOSAL EXTENT

### A1 Limitations and Extent of Proposal

A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents/capacities/ranges are not exceeded:

Proposal element	Location	Maximum extent
Physical elements		
<b>Terrestrial development envelope</b>	Within the development envelope shown in Figure 1	Clearing of no more than 51.2 <b>ha</b> of native vegetation within a development envelope of 130.15 <b>ha</b>
<b>Marine development envelope</b>	Within the development envelope shown in Figure 2	Disturbance to no more than 8.39 ha within a 11.45 <b>ha</b> development envelope
Operational elements		
Marine brine discharge		Maximum salinity of 75,200 mg/L
Intake velocity		Maximum velocity 0.15 metres/second
Timing elements		
Project life – operation of desalination plant		100 years from commissioning of desalination plant

## PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES

### B1 Flora and Vegetation

B1-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes:

- (1) no **adverse impacts** to the three *Melaleuca* sp. Wanneroo (G. J. Keighery 16705) individuals recorded in the **targeted flora survey**;
- (2) **disturb** no more than the following environmental values:
  - (a) 1.7 **ha** of the Banksia woodlands of the Swan Coastal Plain ecological community;
  - (b) 1.16 **ha** of the Tuart (*Eucalyptus gomphocephala*) woodlands and forest of the Swan Coastal Plain ecological community;
  - (c) 1.03 **ha** of the *Melaleuca huegelii* - *Melaleuca systema* shrublands on limestone ridge (Gibson et al. 1994 type 26a);
  - (d) 1.55 **ha** of the Northern Spearwood shrublands and woodlands ('floristic community type (FCT) 24');
  - (e) 28.08 **ha** of the Acacia shrublands on taller dunes, Southern SCP ('floristic community type (FCT) 29b'); and
  - (f) 9.42 **ha** of native vegetation within Bush Forever sites, of which 5.7 ha is regionally significant bushland;
- (3) no **adverse impacts** to native vegetation within twenty (20) metres outside the **terrestrial development envelope**; and
- (4) no **adverse impacts** to vegetation within Neerabup National Park occurring within or directly adjacent to the **terrestrial development envelope**.

B1-2 Prior to **ground disturbing activities** within the area shown in Figure 3 of Schedule 1, the proponent shall:

- (1) undertake a survey in accordance with *EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016)* of the area shown in Figure 3 of Schedule 1, to determine the occurrence of the *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a) threatened ecological community;
- (2) submit the findings of the survey required under condition B1-2(1), in the form of a report to the **CEO** for confirmation that it was conducted in

accordance with *EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016);

- (3) submit to the **CEO** the measures to be implemented to ensure no **adverse impacts** to *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a) threatened ecological community, within the area shown in Figure 3 of Schedule 1, should it be identified under condition B1-2(1);
- (4) not undertake **ground disturbing activities** within the area shown in Figure 3 of Schedule 1, until the **CEO** has **confirmed** in writing that the measures referred to in condition B1-2(3) meet the requirements of that condition; and
- (5) implement measures confirmed by the **CEO** in accordance with condition B1-2(3) to ensure no **adverse impacts** to *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a) threatened ecological community if identified under condition B1-2(1).

B1-3 The proponent shall implement hygiene protocols consistent with the *Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia, Part 2 National Best Practice Guidelines* as amended or replaced from time to time.

B1-4 The proponent must:

- (1) **revegetate** all areas of native vegetation **disturbed**, but not reasonably expected to be required for ongoing **operations**, along the **integration pipeline** route within twenty-four (24) months of completion of **construction activities**;
- (2) demonstrate the **revegetation** required by condition B1-4(1) is consistent with pre-construction **vegetation densities**; and
- (3) undertake annual monitoring and any remedial measures to ensure revegetation required by condition B1-4(1) will successfully establish within five (5) years post construction.

## **B2 Terrestrial Fauna**

B2-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes:

- (1) **disturb** no more than the following environmental values:
  - (a) 52.1 **ha** of foraging habitat for Carnaby's cockatoo (*Zanda latirostris*);

- (b) 49.8 **ha** of foraging habitat for forest red-tailed black cockatoo (*Calyptrorhynchus banksii naso*); and
- (c) 96 **potential nesting trees** and 8 **suitable nesting trees**.

B2-2 During construction, the proponent must undertake the following actions:

- (1) within seven (7) days prior to clearing, using a **fauna handler** with experience in surveying for **black cockatoos**, inspect all **suitable nesting hollows** within the **terrestrial development envelope** to determine if any hollows are being used for nesting by **black cockatoos**;
- (2) if any hollows are in use by **black cockatoos**, the proponent shall not **disturb** the nesting tree, or vegetation within a ten (10) metre radius of the nesting tree, until after the **black cockatoos** have naturally completed nesting (young have fledged and dispersed) and a **fauna handler** has verified that the hollow(s) are no longer being used by **black cockatoos**;
- (3) clear trapped vertebrate fauna from within open **trenches** using a **fauna handler**:
  - (a) at least twice daily, with the first daily clearing to be completed no later than three hours after sunrise and the second clearing to be completed between the hours of 3:00 pm and 6:00 pm of that same day, unless otherwise agreed to by the **CEO**; and
  - (b) within one (1) hour prior to backfilling of **trenches**;
- (4) ensure that open **trench** lengths do not exceed a length capable of being inspected and cleared by the requirements set out in condition B2-2(3);
- (5) provide egress points, ramps and/or fauna refuges that provide suitable shelter from the sun and predators for trapped fauna in open **trenches** at intervals not exceeding fifty (50) metres; and
- (6) in the event of substantial rainfall, and following the clearing of vertebrate fauna from the **trench**, pump out any pooled water in the open **trench** and discharge it to adjacent vegetated areas in a manner that does not cause erosion.

### **B3 Landforms**

B3-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcome:

- (1) **disturb** no more than 35.1 **ha** of the **Alkimos Dune Complex**, including no more than 5.17 **ha** of **area 10b**.

B3-2 The proponent must ensure the implementation of the proposal achieves the following environmental objectives:

- (1) no **adverse impacts**, beyond the extents identified in condition B3-1(1); and
- (2) **rehabilitated** dunes and the **westerly-facing berm** are stable and not prone to erosion, are not a source of ongoing dust emissions, and contain cover and composition of native dune vegetation consistent with undisturbed **Alkimos Dune Complex** within a two (2) kilometre radius.

B3-3 The proponent must:

- (1) **rehabilitate** the **westerly-facing berm** and any areas **disturbed** during construction within **area 10b** that are not reasonably required for ongoing **operations**;
- (2) commence **rehabilitation** of areas listed in condition B3-3(1) within twelve (12) months of the completion of **construction activities** to achieve the environmental objective in condition B3-2(2).

B3-4 The proponent must, in consultation with the Department of Mines, Industry Regulation and Safety, prepare an environmental management plan that satisfies the requirements of condition C5 and demonstrates how achievement of the Landforms environmental objectives in condition B3-2 will be achieved, and submit it to the **CEO**.

#### **B4 Marine Environmental Quality**

B4-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes:

- (1) no **adverse impacts** on the **marine environmental values** of Ecosystem Health, Fishing and Aquaculture, Recreation and Aesthetics, Industrial Water Supply, Cultural and Spiritual outside the **Low Ecological Protection Area**; and
- (2) the levels of ecological protection to be achieved inside of the:
  - (a) **Low Ecological Protection Area**; and
  - (b) **High Ecological Protection Areas**,

are consistent with the corresponding level of ecological protection described in Appendix 1, Table 1 of the **Marine Water Quality Technical Guidance**, including the method used to derive **Environmental Quality Guidelines** and **Environmental Quality Standards**, or an alternative method that has been confirmed by the CEO.

B4-2 The proponent must review and revise the Commissioning and Operations Marine Environmental Management Plan (Rev 3, February 2023), that satisfies the requirements of condition C4 and demonstrates how the achievement of the marine environmental quality environmental outcomes in condition B4-1 will be monitored and substantiated, and submit to the **CEO**.

## **B5 Benthic Communities and Habitat**

B5-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes:

- (1) **irreversible loss of benthic communities and habitats** shall not exceed 0.13 ha;
- (2) **disturbance to benthic communities and habitats** shall not exceed 8.39 ha within the **marine development envelope**; and
- (3) no **irreversible loss of benthic communities and habitats** outside of the **zones of high impact**.

## **B6 Marine Fauna**

B6-1 The proponent shall implement the proposal to achieve the following environmental objectives:

- (1) minimise the risk of physical injury or mortality from vessel strike on **significant marine fauna**;
- (2) minimise the risk of behavioural changes, health impacts, physical injury, or mortality from underwater noise emissions from construction to **significant marine fauna** (including temporary or permanent hearing loss).

B6-2 During **marine construction activities**, the proponent shall:

- (1) implement measures to avoid vessel strikes with **significant marine fauna**;
- (2) implement a **significant marine fauna** observation zone consisting of a at least one (1) kilometre radius from each underwater drilling location whereby an observer must undertake **significant marine fauna** observation for a minimum of 30 minutes prior to the commencement of **marine construction activities**;
- (3) implement an exclusion zone consisting of at least 500 metre radius from the underwater drilling location whereby:
  - (a) **marine construction activities** cannot commence should a **significant marine fauna** be within the exclusion zone; and

- (b) **marine construction activities** to cease should a **significant marine fauna** enter the exclusion zone during construction and are not to recommence until the **significant marine fauna** have moved outside the exclusion zone.
- (4) must engage a suitably trained and experienced marine fauna observer who has a demonstrated knowledge of **significant marine fauna** in the marine temperate region to undertake observations in the observation zone and exclusion zone;
- (5) implement noise management procedures to avoid temporary and permanent changes to hearing sensitivity in **significant marine fauna** and minimise behavioural responses;
- (6) maintain a log of recorded sightings, locations and behaviours indicative of stress or disturbance of **significant marine fauna** and submit these to the **National Cetacean Sighting Database**; and
- (7) document and report to relevant regulators any incidents relating to **significant marine fauna** injury / mortality.

## **B7 Greenhouse Gas Emissions**

- B7-1 The proponent shall take measures to ensure there are zero **net scope 1 and 2 GHG emissions** from the **commencement of operations** throughout the life of the proposal.
- B7-2 At least six (6) months prior to commissioning, the proponent shall revise the Greenhouse Gas Management Plan (Revision 3, 2023) and submit to the **CEO** to:
  - (1) be consistent with the achievement of **net zero scope 1 and 2 GHG emissions** for the operation of the proposal;
  - (2) update the estimated **proposal GHG emissions** and **emissions intensity** for the life of the proposal;
  - (3) include a comparison of the estimated **proposal GHG emissions** and **emissions intensity** for the life of the proposal against other comparable facilities;
  - (4) update and revise any measures that the proponent will implement to avoid, reduce and/or offset **proposal GHG emissions** and/or reduce the **emissions intensity** of the proposal; and
  - (5) provide a program for the future review of the plan to:
    - (a) assess the effectiveness of measures referred to in condition B7-2(4); and



- (b) identify and describe options for future measures that the proponent may or could implement to avoid, reduce, and/or offset **proposal GHG emission** and/or reduce the **emissions intensity** of the proposal.

B7-3 Within one (1) month of receiving confirmation in writing from the **CEO** that:

- (1) the Greenhouse Gas Environmental Management Plan referred to in condition B7-2 has been revised and satisfies condition B7-2; or
- (2) any subsequent version of the **confirmed** Greenhouse Gas Environmental Management Plan submitted under condition C2 satisfies condition B7-2,
- (3) the proponent must submit a separate summary of the relevant plan to the **CEO**, which must include a summary of the matters specified in conditions B7-2(1) to condition B7-2(4).

B7-4 The proponent shall submit an annual report to the **CEO** each year by 31 March, commencing on the first 31 March after the **commencement of operations**, or such other date within that financial year as is agreed by the **CEO** to align with other reporting requirements for **GHG**, specifying for the previous financial year:

- (1) the quantity of **proposal GHG emissions**; and
- (2) the **emissions intensity** for the proposal.

B7-5 The proponent shall submit to the **CEO** by 31 March 2030 or such other date within that financial year as is agreed by the **CEO** to align with other reporting requirements for GHG, and every five (5) years thereafter:

- (1) a consolidated report specifying:
  - (a) for each of the preceding five financial years, the matters referred to in conditions B7-4(1) and B7-4(2);
  - (b) for the 5 year period from the **commencement of operations** that ended on 30 June of the year before the report is due:
    - (i) the quantity of **proposal GHG emissions**;
    - (ii) the **net GHG emissions**;
    - (iii) any measures that have been implemented to avoid or reduce **proposal GHG emissions**; and
    - (iv) the type, quantity, identification or serial number, and date of retirement or cancellation of any **large-scale generation certificates** and **authorised offsets** which have been

retired or cancelled and which have been used to calculate the **net GHG emissions** referred to in condition B7-5(1)(b)(ii), including written evidence of such retirement or cancellation.

- (2) an audit and peer review report of the consolidated report required by condition B7-5(1), carried out by an independent person or independent persons with suitable technical experience dealing with the suitability of the methodology used to determine the matters set out in the consolidated report, whether the consolidated report is accurate and whether the consolidated report is supported by credible evidence.

B7-6 A consolidated report referred to in condition B7-5(1) must be accompanied by:

- (1) a revision of the **confirmed** Greenhouse Gas Environmental Management Plan under condition B7-2; and
- (2) a separate summary report, from the **commencement of operations** that ended on 30 June of the year before the report is due, and which includes:
  - (a) a graphical comparison of **net GHG emissions** with the zero **net GHG emissions** limit detailed in condition B7-1;
  - (b) **emissions intensity** compared to comparable plant facilities and **emissions intensity** of the **South West Interconnected System** used to estimate the scope 2 emissions;
  - (c) a summary of measures to reduce the **proposal GHG emissions** undertaken by the proponent; and
  - (d) a clear statement as to whether zero **net GHG emissions** set out in condition B7-1 have been met, and continue to be met in future **net GHG emissions**, including a description of any reasons why it has not been, and/or are unlikely to be met.

B7-7 In addition to the requirements of condition C2-6 about publication of the **confirmed** Greenhouse Gas Environmental Management Plan, the proponent shall make the summary of the **confirmed** Greenhouse Gas Environmental Management Plan, and all reports required by this condition B7 publicly available on the proponent's website within the timeframes specified below, or in any other manner or time specified by the **CEO**:

- (1) the summary of the **confirmed** Greenhouse Gas Environmental Management Plan within twenty (20) business days of submitting the document to the **CEO** in accordance with condition B7-3; and

- (2) the reports referred to in condition B7-4, condition B7-5, and condition B7-6 within twenty (20) business days of submitting the document to the **CEO**, and they shall remain published for the life of the proposal.

## **B8 Offsets**

B8-1 The proponent must implement offsets to counterbalance the significant residual impacts of the proposal on the following environmental values:

- (a) Banksia woodlands of the Swan Coastal Plain ecological community;
- (b) Tuart (*Eucalyptus gomphocephala*) woodlands and forest of the Swan Coastal Plain ecological community;
- (c) *Melaleuca huegelii* - *Melaleuca systema* shrublands on limestone ridge (Gibson et al. 1994 type 26a);
- (d) **regionally significant bushland**;
- (e) foraging habitat for Carnaby's black cockatoo (*Zanda latirostris*)
- (f) foraging habitat for forest red-tailed black cockatoo (*Calyptrorhynchus banksii naso*); and
- (g) **potential nesting trees** and **suitable nesting trees**;

B8-2 In order to meet the requirements of condition B8-1 the proponent must ensure the implementation of the offsets achieves the following environmental outcomes and objectives:

- (1) ensure implementation of offsets provides an environmental benefit for the environmental values listed in condition B8-1;
- (2) ensure **land acquisition** offsets for the value identified in condition B8-1(d):
  - (a) contain at least two (2) times the extent impacted;
  - (b) contain the same vegetation communities and/or vegetation complexes to the environmental value being impacted; and
  - (c) contain, or can be enhanced to achieve, a vegetation condition that is commensurate to the environmental value being impacted;
- (3) revegetate at least seventy (70) ha within 37 km of the **terrestrial development envelope** to provide **self-sustaining** foraging habitat for **black cockatoos**;

- (4) install at least three (3) artificial nesting hollows for every **suitable nesting tree** authorised to be cleared in accordance with condition B2-1;
- (5) ensure **land acquisition** offsets contain at least three (3) times the number of **potential and suitable nesting trees** cleared by the proposal;

*Alkimos Seawater Desalination Plant Offset Strategy (Environmental Management Plan)*

B8-3 The proponent shall revise the Draft Alkimos Seawater Desalination Plant Offset Strategy (April 2023) (Environmental Management Plan) and submit it to the **CEO**. The revised Alkimos Seawater Desalination Offset Strategy (Environmental Management Plan) must:

- (1) demonstrate that the objectives and outcomes in condition B8-1 and condition B8-2 will be met;
- (2) be prepared in consultation with **DBCA**;
- (3) spatially identify the **Proposed Offset Conservation Areas** proposed as:
  - (a) **land acquisition** offset area(s) and/or other lands to receive **on-ground management**; and
  - (b) **revegetation** offset area(s) to receive **on-ground management**;
- (4) for the **land acquisition** offset area(s):
  - (a) demonstrate that the **Proposed Offset Conservation Areas** contain the minimum extents of the environmental values needed to meet the objectives and outcomes of condition B8-1 and condition B8-2;
  - (b) identify how the **Proposed Offset Conservation Areas** will be protected, being either the sites are ceded to the Crown for the purpose of management for conservation, or the sites are managed under other suitable mechanism for the purpose of conservation as agreed by the **CEO** by notice in writing;
  - (c) specify the quantum of works associated with establishing the **Proposed Offset Conservation Areas**, including a contribution for maintaining the offset for at least twenty (20) years after completion of purchase; and
  - (d) identify the **relevant management body** for the on-going management of the **Proposed Offset Conservation Areas**,

including its role, and the role of the proponent, and confirmation in writing that the **relevant management body** accepts responsibility for its role;

- (5) identify the proportion of resources allocated for each specific offset addressed by the Alkimos Seawater Desalination Offset Strategy (Environmental Management Plan);
- (6) demonstrate how the environmental values within the **Proposed Offset Conservation Areas** will be maintained and/or improved in order to meet the objectives and outcomes in condition B8-1 and condition B8-2 through application of the principles of the *WA Environmental Offsets Policy* and completion of the WA Offsets Template as described in the *WA Environmental Offsets Guidelines*, and the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*, or any subsequent revisions or replacements of these documents;
- (7) demonstrate the artificial nesting hollows required by condition B8-2(4) will:
  - (a) be installed at suitable locations determined in consultation with **DBCA**, and in accordance with *Fauna Notes – Artificial hollows for black cockatoos* (DBCA 2023) or any subsequent **DBCA** revision of this guideline;
  - (b) be designed and placed in accordance with the specifications detailed within the *Fauna Notes – Artificial hollows for black cockatoos* (DBCA 2023) or any subsequent **DBCA** revision of this guideline; and
  - (c) be monitored and maintained in accordance with the specifications detailed in *Fauna Notes – Artificial hollows for black cockatoos* (DBCA 2023) or any subsequent **DBCA** revision of this guideline, for a period of at least twenty (20) years;
- (8) where a research offset is proposed, prepare a draft research program that:
  - (a) identifies the objectives and intended outcomes;
  - (b) identifies how the research will result in a positive conservation outcome, and will either improve management and protection or address priority knowledge gaps that have been identified as a research priority needed to improve management and protection, for the environmental values identified in condition B8-1;

- (c) demonstrates the consistency of the objectives and outcomes in condition B8-3(8)(a) with any relevant guidance, including but not limited to, recovery plans or area management plans, the principles of the *WA Environmental Offsets Policy*, the *WA Environmental Offsets Guidelines*, or any subsequent revisions of these documents;
  - (d) identifies and justifies how the research will support **land acquisition** and/or **on-ground management** in achieving a positive conservation outcome;
- (9) identify how the ongoing performance of the offset measures, and whether they are achieving the objectives and intended outcomes in condition B8-1 and condition B8-2 will periodically be made publicly available.

*Alkimos Seawater Desalination Plant Offset Environmental Management Plan*

- B8-4 The proponent must prepare and submit to the **CEO** an offset environmental management plan that is consistent with the **confirmed** Alkimos Seawater Desalination Plant Offset Strategy (Environmental Management Plan) and satisfies the requirements of condition 8-1 and condition B8-2 and demonstrates how the environmental objectives and outcomes in condition B8-1 and condition B8-2 will be achieved.
- B8-5 The Alkimos Seawater Desalination Plant Offset Environmental Management Plan must:
- (1) be prepared in consultation with **DBCA**;
  - (2) demonstrate how the Alkimos Seawater Desalination Plant Offset Environmental Management Plan is consistent with the **confirmed** Alkimos Seawater Desalination Offset Strategy, including how the Plan meets the requirements of condition B8-3;
  - (3) for the **on-ground management** offsets identified in condition B8-3(3):
    - (a) state the targets for each environmental value to be achieved by **on-ground management**, including completion criteria which will result in a **tangible improvement** to the environmental values listed in condition B8-1. For **revegetation** offsets relating to **black cockatoo** environmental values, this must include, but not be limited to:
      - (i) quantity of **black cockatoo** foraging habitat to be achieved;
      - (ii) completion criteria to measure the foraging habitat value, vegetation structure, species diversity and abundance,

plant density and vegetation condition that is to be achieved to provide high-quality **black cockatoo** foraging habitat;

- (iii) densities of *Phytophthora* Dieback resistant species where appropriate;
  - (iv) criteria to measure and demonstrate the **revegetation** is **self-sustaining**;
  - (v) contingency actions to be undertaken if criteria are not met;
- (b) demonstrate the consistency of the targets with the environmental objectives and outcomes in condition B8-1 and condition B8-2 and the objectives of any relevant guidance, including but not limited to, recovery plans, conservation advices, or area management plans where relevant;
- (c) detail the **on-ground management actions** with associated timeframes for implementation and completion, to achieve the targets identified in condition B8-5(3);
- (4) detail the monitoring, reporting and evaluation mechanisms for the targets identified under condition B8-5(3).
- (5) include a procedure for incorporating the findings and learnings from the research in condition B8-6 into the future revisions of the Offset Environmental Management Plan;

B8-6 where a **research offset** is proposed, prepare a research program that:

- (1) demonstrates how the program meets the requirements of condition B8-3(8);
- (2) identifies the objectives and intended outcomes, and specifies the associated deliverables and completion criteria;
- (3) provides an implementation and reporting schedule, including an outline of key activities, all deliverables, stages of implementation, reporting of research results (including interim results), reporting on implementation status, and milestones towards completion criteria;
- (4) identifies the governance arrangements including responsibilities for implementing, and oversight of, the research program, agreements with government agencies, agreements with any third parties, and contingency measures;
- (5) identify how a research program summary, and the results (including interim results) of the research program will be communicated and/or published in an open access format; and

- (6) identifies the third party to carry out the work required to meet the objectives and intended outcomes of condition B8-6(2), who is satisfactory for the role to the **CEO**. In applying to the **CEO** for endorsement of the selected third parties, the proponent shall provide:
  - (a) demonstration of the track record, experience, qualifications, and competencies of the proposed third party to carry out the work and achieve the outcomes.



## **PART C – ENVIRONMENTAL MANAGEMENT PLANS AND MONITORING**

### **C1 Environmental Management Plans: Conditions Related to Commencement of Implementation of the Proposal**

C1-1 The proponent must:

- (1) not undertake **ground disturbing activities** until the **CEO** has **confirmed** in writing that the environmental management plan required by condition B3-4 meets the requirements of that condition and condition C5;
- (2) not undertake commissioning of the desalination plant in the **terrestrial development envelope** until the **CEO** has **confirmed** in writing that the revised environmental management plan required by condition B4-2 meets the requirements of that condition and condition C4;
- (3) not undertake the **commencement of operations** until the **CEO** has **confirmed** in writing that the environmental management plan referred to in condition B7-2 has been revised and satisfies the requirements of that condition;
- (4) not undertake **ground disturbing activities** until the **CEO** has **confirmed** in writing that the Alkimos Desalination Plant Offset Strategy required by condition B8-3 meets the requirements of that condition;
- (5) submit the Alkimos Desal Plant Offset Environmental Management Plan required by condition B8-4 within six (6) months of the Alkimos Desalination Plant Offset Strategy being **confirmed** by the **CEO**.

### **C2 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication**

C2-1 Upon being required to implement an environmental management plan under Part B, or after receiving notice in writing from the **CEO** under condition C1-1 that the environmental management plan(s) required in Part B satisfies the relevant requirements, the proponent must:

- (1) implement the most recent version of the **confirmed** environmental management plan; and
- (2) continue to implement the **confirmed** environmental management plan referred to in condition C2-1(1), other than for any period which the **CEO** confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making process, in which case the implementation of the environmental management plan is no longer required for that period.

C2-2 The proponent:

- (1) may review and revise a **confirmed** environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;
- (2) must review and revise a **confirmed** environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the **CEO**;
- (3) must revise and submit to the **CEO** the **confirmed** environmental management plan if there is a material risk that the outcomes or objectives it is required to achieve will not be complied with, including but not limited to as a result of a change to the proposal;
- (4) must revise and submit to the **CEO** the **confirmed** Greenhouse Gas Environmental Management Plan by the date that the first five (5) yearly consolidated report is required to be submitted under condition B7-6(1) and every five (5) years after that date.

C2-3 Despite condition C2-1, but subject to conditions C2-4 and C2-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes, or objectives which the environmental management plan is required to achieve.

C2-4 If the proponent is to implement minor revisions to an environmental management plan under condition C2-3, the proponent must provide the **CEO** with the following at least twenty (20) business days before it implements the revisions:

- (1) the revised environmental management plan clearly showing the minor revisions;
- (2) an explanation of and justification for the minor revisions; and
- (3) an explanation of why the minor revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes, or objectives which the environmental management plan is required to achieve.

C2-5 The proponent must cease to implement any revisions which the **CEO** notifies the proponent (at any time) in writing may not be implemented.

C2-6 **Confirmed** environmental management plans, and any revised environmental management plans under condition C2-4(1), must be published on the proponent's website and provided to the **CEO** in electronic form suitable for on-line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

### **C3 Conditions Related to Monitoring**

C3-1 The proponent must undertake monitoring capable of:

- (1) substantiating whether the proposal limitations and extents in Part A are exceeded; and
- (2) **detecting** and substantiating whether the environmental outcomes identified in Part B are achieved (excluding any environmental outcomes in Part B where an environmental management plan is expressly required to monitor achievement of that outcome).

C3-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2, a compliance monitoring report that:

- (1) outlines the monitoring that was undertaken during the implementation of the proposal;
- (2) identifies why the monitoring was capable of substantiating whether the proposal limitation and extents in Part A are exceeded;
- (3) for any environmental outcomes to which condition C3-1(2) applies, identifies why the monitoring was scientifically robust and capable of **detecting** whether the environmental outcomes in Part B are met;
- (4) outlines the results of the monitoring;
- (5) reports whether the proposal limitations and extents in Part A were exceeded and (for any environmental outcomes to which condition C3-1(2) applies) whether the environmental outcomes in Part B were achieved, based on analysis of the results of the monitoring; and
- (6) reports any actions taken by the proponent to remediate any potential non-compliance.

### **C4 Environmental Management Plans: Conditions Relating to Monitoring and Adaptive Management for Outcomes Based Conditions**

C4-1 The environmental management plan required under condition B4-2 must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions are met, and must include:

- (1) **Environmental Quality Standards** and **Environmental Quality Guidelines** to protect the **marine environmental values** and levels of ecological protection, including the methodology used to derive site-specific **Environmental Quality Standards** and **Environmental Quality Guidelines**;
- (2) monitoring parameters, sites, control/reference sites, methodology, timing, and frequencies which will be used to measure **Environmental Quality Standards** and **Environmental Quality Guidelines**. Include methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future;
- (3) baseline data;
- (4) data collection and analysis methodologies;
- (5) adaptive management methodology;
- (6) **contingency measures** which will be implemented if **Environmental Quality Guidelines** or **Environmental Quality Standards**, are not met; and
- (7) reporting requirements.

C4-2 The environmental management plan required under condition B4-2 are also required to include, but not be limited to:

- (1) the spatial data and coordinates for the **Low Ecological Protection Area** referred to in condition B4-1;
- (2) at least two years of baseline data for salinity in the local receiving environment;
- (3) measures to ensure that the 99% species protection guideline 'trigger' levels for toxicants, as defined in the **ANZG**, are achieved in the **High Ecological Protection Areas**;
- (4) the monitoring and evaluation, including remodelling, of the environmental effects of discharging wastewater into the marine environment off Alkimos, during commissioning phase including on density stratification and dissolved oxygen concentrations in bottom waters, to assess performance against the environmental outcome;
- (5) a program to undertake whole-of-effluent toxicity testing during the commissioning phase, of two wastewater types, including one sample that contains **clean in place chemicals**, and one sample that does not contain **clean in place chemicals**, with sufficient rigour to determine the dilutions required to achieve the 99% species protection level of each

wastewater sample type using protocols that are consistent with the **ANZG**, and to determine which sample type has the greatest toxicity;

- (6) a program to undertake whole-of-effluent toxicity testing during the operations phase, of the type of wastewater that has the greatest toxicity as determined during the commissioning phase, with sufficient rigour to determine the dilutions required to achieve the EC10(%) of at least three (3) taxa, using protocols that are consistent with the **ANZG**;
- (7) a program for the future review and revision of the plan prior to **commencement of operations** following the completion of requirements specified in condition C4-2(4) and condition C4-2(5).

C4-3 Without limiting condition C3-1, failure to achieve an environmental outcome, regardless of whether threshold **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

#### **C5 Environmental Management Plans: Conditions Related to Management Actions and Targets for Objective Based Conditions**

C5-1 The environmental management plan required under condition B8-5 and condition B3-4 must contain provisions which enable the achievement of the relevant objectives of those conditions and substantiation of whether the objectives are reasonably likely to be met, and must include:

- (1) **management actions**;
- (2) **management targets**; and
- (3) **contingency measures** if **management targets** are not met; and
- (4) reporting requirements.

C5-2 The environmental management plan required under condition B3-4 is also required to include, but not be limited to:

- (1) completion criteria for **rehabilitated** dunes and the **westerly-facing berm**.

C5-3 Without limiting condition C2-1, the failure to achieve an environmental objective, or implement a **management action**, regardless of whether **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

## **PART D – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS**

### **D1 Non-compliance Reporting**

**D1-1** If the proponent becomes aware of a potential non-compliance, the proponent must:

- (1) report this to the **CEO** within seven (7) days;
- (2) implement **contingency measures**;
- (3) investigate the cause;
- (4) investigate environmental impacts;
- (5) advise rectification measures to be implemented;
- (6) advise any other measures to be implemented to ensure no further impact; and
- (7) provide a report to the **CEO** within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(6) above.

**D1-2** Failure to comply with the requirements of a condition, or with the content of an environmental management required under a condition, constitutes a non-compliance with these conditions, regardless of whether the **contingency measures**, rectification or other measures in condition D1-1 above have been or are being implemented.

### **D2 Compliance Reporting**

**D2-1** The proponent must provide an annual Compliance Assessment Report to the **CEO** for the purpose of determining whether the implementation conditions are being complied with.

**D2-2** Unless a different date or frequency is approved by the **CEO**, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent plans must be submitted annually from that date.

**D2-3** Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.

**D2-4** Each annual Compliance Assessment Report must:

- (1) state whether each condition of this Statement has been complied with, including:

- (a) exceedance of any proposal limits and extents;
  - (b) achievement of environmental outcomes;
  - (c) achievement of environmental objectives;
  - (d) requirements to implement the content of environmental management plans;
  - (e) monitoring requirements;
  - (f) implement **contingency measures**;
  - (g) requirements to implement adaptive management; and
  - (h) reporting requirements;
- (2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any outcomes or any objectives are being met;
  - (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;
  - (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance;
  - (5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation;
  - (6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the **CEO** has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.

D2-5 The proponent must prepare a Compliance Assessment Plan which is submitted to the **CEO** at least six (6) months prior to the first Compliance Assessment Report required by condition D2-2, or prior to implementation of the proposal, whichever is sooner.

D2-6 The Compliance Assessment Plan must include:

- (1) what, when and how information will be collected and recorded to assess compliance;
- (2) the methods which will be used to assess compliance;
- (3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with;

- (4) the retention of compliance assessments;
- (5) the table of contents of Compliance Assessment Reports, including audit tables; and
- (6) how and when Compliance Assessment Reports will be made publicly available, including usually being published on the proponent's website within sixty (60) days of being provided to the **CEO**.

### **D3 Contact Details**

D3-1 The proponent must notify the **CEO** of any change of its name, physical address, or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

### **D4 Time Limit for Proposal Implementation**

- D4-1 The proposal must be substantially commenced within five (5) years from the date of this Statement.
- D4-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition D4-1 no later than fourteen (14) days after the expiration of period specified in condition D4-1.
- D4-3 If the proposal has not been substantially commenced within the period specified in condition D4-1, implementation of the proposal must not be commenced or continued after the expiration of that period.

### **D5 Public Availability of Data**

D5-1 Subject to condition D5-2, within a reasonable time period approved by the **CEO** upon the issue of this Statement and for the remainder of the life of the proposal, the proponent must make publicly available, in a manner approved by the **CEO**, all validated environmental data collected before and after the date of this Statement relevant to the proposal (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

D5-2 If:

- (1) any data referred to in condition D5-1 contains trade secrets; or
- (2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a



person that would be, or could reasonably be expected to be, destroyed, or diminished if the confidential information were published,

the proponent may submit a request for approval from the **CEO** to not make this data publicly available and the **CEO** may agree to such a request if the **CEO** is satisfied that the data meets the above criteria.

D5-3 In making such a request the proponent must provide the **CEO** with an explanation and reasons why the data should not be made publicly available.

## **D6 Independent Audit**

D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this Statement, including achievement of the environmental outcomes and/or the environmental objectives and/or environmental performance with the conditions of this Statement, as and when directed by the **CEO**.

D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the **CEO** to undertake the audit under condition D6-1.

D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the **CEO**. The audit report is to be supported by credible evidence to substantiate its findings.

D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner, and form as a Compliance Assessment Report, or as otherwise directed by the **CEO**.

[signed on 10 August 2023]

Hon Reece Whitby MLA

**MINISTER FOR ENVIRONMENT; CLIMATE ACTION**

<b>Key decision-making authorities consulted under section 45(2):</b>
Minister for Water Minister for Lands Minister for Planning

**Table 1: Abbreviations and definitions**

Acronym or abbreviation	Definition or term
<b>Adverse impact /adversely impacted</b>	<p>Negative change when compared to pre-construction conditions that is neither trivial nor negligible that could result in a reduction in health, diversity or abundance of the receptor/s being impacted, or a reduction in <b>environmental value</b>. Adverse impacts can arise from direct or indirect <b>disturbance</b>, or other impacts from the proposal.</p> <p>With specific reference to flora and vegetation this includes, but is not limited to, hydrological change, spread or introduction of <b>environmental weeds</b>, introduction or spread of disease, changes in erosion and edge effects.</p> <p>With specific reference to landforms this includes, but is not limited to, changes in erosion/deposition/accretion.</p>
<b>Alkimos Dune Complex</b>	As mapped by the Geoheritage Sites and Reserve Register, Western Australia; unique ID: ANZWA1220000661; housed by Department of Mines, Industry Regulation and Safety; accessed on 21 March 2023 <a href="http://www.dmp.wa.gov.au/datacentre">http://www.dmp.wa.gov.au/datacentre</a>
<b>ANZG</b>	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ (2000))
<b>Area 10b</b>	An area referred to in Attachment 1, Specification 2-1 and spatially defined in the attached Figure of Ministerial Statement 722 as one of the areas to be protected and managed for conservation purposes to protect the integrity, function, and environmental value of the bushland to the requirements of the WAPC on advice of the EPA, and shall only be used for conservation, landscape, and complementary purposes. Minor infrastructure may be installed within these areas, providing the work is undertaken in accordance with a Management Plan approved by the EPA.
<b>Authorised offsets</b>	<p>Units representing GHG emissions issued under one of the following schemes and cancelled or retired in accordance with any rules applicable at the relevant time governing the cancellation or retiring of units of that kind:</p> <ul style="list-style-type: none"> <li>(a) Australian Carbon Credit Units issued under the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i> (Cth);</li> <li>(b) Verified Emission Reductions issued under the Gold Standard program;</li> <li>(c) Verified Carbon Units issued under the Verified Carbon Standard program; or</li> </ul>

Acronym or abbreviation	Definition or term
	(d) other offset units that the Minister has notified the proponent in writing meet integrity principles and are based on clear, enforceable, and accountable methods.
<b>Benthic communities and habitats</b>	Functional ecological communities that inhabit the seabed and the areas of seabed that support these communities (e.g. high relief reef, platform reef, sand). The communities may include biota such as algae, seagrass and corals that obtain their energy primarily from photosynthesis, or animals such as ascidians, soft corals and some sponges that obtain their energy primarily by consuming live or dead organisms
<b>Black cockatoos</b>	Carnaby's black cockatoo ( <i>Zanda latirostris</i> ) and forest red-tailed black cockatoo ( <i>Calyptorhynchus banksii naso</i> )
<b>CEO</b>	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or the <b>CEO's</b> delegate.
<b>Clean in place chemicals</b>	Clean in place chemicals are additional chemicals injected into treated wastewater streams from time to time during operations to ensure pipelines remain functional.
<b>Commencement of operations</b>	Means commencing operation of the proposal.
<b>Commissioning</b>	The testing phase of the equipment and seawater desalination plant, prior to the operations phase.
<b>Confirm/ confirmed/ confirmation</b>	<p>In relation to a plan required to be made and submitted to the <b>CEO</b>, means, at the relevant time, the plan that the <b>CEO</b> confirmed, by notice in writing, meets the requirements of the relevant condition.</p> <p>In relation to a plan required to be implemented without the need to be first submitted to the <b>CEO</b>, means that plan until it is revised, and then means, at the relevant time, the plan that the <b>CEO</b> confirmed, by notice in writing, meets the requirements of the relevant condition.</p>
<b>Construction activities</b>	Activities that are associated with the substantial implementation of the proposal, including but not limited to, earthmoving, vegetation clearing, grading or construction of right of way. Construction activities do not include Geotechnical investigations (including potholing for services and the installation of

Acronym or abbreviation	Definition or term
	piezometers) and other preconstruction activities where no clearing of vegetation is required.
<b>Contingency measures</b>	Planned actions for implementation if it is identified that an environmental outcome, environmental objective, <b>threshold criteria</b> , <b>Environmental Quality Standards</b> or management target are likely to be, or are being, exceeded. Contingency measures include changes to operations or reductions in <b>disturbance</b> or <b>adverse impacts</b> to reduce impacts and must be decisive actions that will quickly bring the impact to below any relevant threshold, management target and to ensure that the environmental outcome and/or objective can be met.
<b>DBCA</b>	The Department of Biodiversity, Conservation and Attractions.
<b>Detecting/ Detectable</b>	The smallest statistically discernible effect size that can be achieved with a monitoring strategy designed to achieve a statistical power value of at least 0.8 or an alternative value as determined by the <b>CEO</b> .
<b>Disturb/ Disturbed/ Disturbance</b>	<p>Flora – result in death, destruction, removal, severing or doing substantial damage to</p> <p>Fauna – has the effect of altering the natural behaviour of fauna to its detriment</p> <p><b>Benthic communities and habitats</b> – measurable <b>adverse</b> impact on <b>benthic communities or habitats</b> that does not result in <b>irreversible loss</b></p> <p>Direct – causes or immediately has the disturbance effect</p> <p>Indirect – materially contributes to the disturbance effect</p>
<b>Emissions intensity</b>	<b>Proposal GHG emissions</b> per tonnes per annum of product produced.
<b>Environmental value</b>	A beneficial use, or ecosystem health condition.
<b>Environmental Quality Guidelines</b>	Threshold numerical values or narrative statements which if met indicate there is a high degree of certainty that the associated environmental quality objective has been achieved.
<b>Environmental Quality Standards</b>	Threshold numerical values or narrative statements that indicate a level which if not met indicates there is a significant risk that the associated environmental quality objective has not been achieved and a management response is required.

Acronym or abbreviation	Definition or term
<b>Environmental weeds</b>	Any plant declared under section 22(2) of the <i>Biosecurity and Agriculture Management Act 2007</i> , any plant listed on the Weeds of National Significance List and any weeds listed on the Department of Biodiversity, Conservation and Attractions' Swan Region Impact and Invasiveness Ratings list, as amended, or replaced from time to time.
<b>Fauna handler</b>	A person who is qualified and licenced under section 40 of the <i>Biodiversity Conservation Act 2016</i> .
<b>GHG emissions</b>	Greenhouse gas emissions expressed in tonnes of carbon dioxide equivalent (CO <sub>2</sub> -e) as calculated in accordance with the definition of 'carbon dioxide equivalence' in Section 7 of the National Greenhouse and Energy Reporting Act 2007 (Cth), or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
<b>Greenhouse gas or GHG</b>	Has the meaning given by Section 7A of the <i>National Greenhouse and Energy Reporting Act 2007</i> (Cth) or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
<b>Ground disturbing activities</b>	Any activity or activities undertaken in the implementation of the proposal, including any clearing, civil works, or construction.
<b>Ha</b>	Hectare.
<b>High Ecological Protection Areas</b>	The area outside the <b>Low Ecological Protection Area</b> and as defined in the <i>Technical Guidance Protecting the Quality of Western Australia's Marine Environment</i> , as amended from time to time, and available at <a href="http://www.epa.wa.gov.au">www.epa.wa.gov.au</a> .
<b>Integration pipeline</b>	As defined in the proponent's Proposal Content Document, as amended by section 43A of the <i>Environmental Protection Act 1986</i> , or any future amendments approved under the <i>Environmental Protection Act 1986</i> .
<b>Irreversible loss</b>	Adverse impact which is unlikely to, or does not return to the pre-impact state within five (5) years following the completion of proposal related activities that are likely to have an impact on <b>benthic communities and habitats</b> .

Acronym or abbreviation	Definition or term
<b>Land acquisition</b>	The protection of environmental values on an area of initially unprotected land for the purpose of conservation through improved security of tenure or restricting the use of land (e.g. ceding land to the Crown or perpetual conservation covenants). This includes upfront costs of establishing the offset site and the on-going management costs of maintaining the offset for the long term (20 years).
<b>Large-scale generation certificates</b>	Means a certificate created under the <i>Renewable Energy (Electricity) Act 2000</i>
<b>Low Ecological Protection Area</b>	The Low Ecological Protection Area is defined as the 100 m radius from the centre point of each outfall diffuser.
<b>Management actions</b>	The identified actions implemented with the intent of achieving the environmental objective.
<b>Management targets</b>	A type of indicator to evaluate whether an environmental objective is being achieved.
<b>Marine construction activities</b>	Activities that are associated with the substantial implementation of the marine related aspects of the proposal, including but not limited to, earthmoving, underwater drilling, <b>disturbance</b> of the seabed and any other activity that may <b>disturb significant marine fauna</b> .
<b>Marine development envelope</b>	The area shown within Figure 2 and defined by coordinates in Schedule 1.
<b>Marine environmental value</b>	Particular values or uses of the marine environment that are important for a healthy ecosystem or for public benefit, welfare, safety or health and which require protection from the effects of pollution, waste discharges and deposits as defined in the Technical Guidance Protecting the Quality of Western Australia's Marine Environment, as amended from time to time, and available at <a href="http://www.epa.wa.gov.au">www.epa.wa.gov.au</a> .
<b>Marine Water Quality Technical Guidance</b>	<i>Technical Guidance for protecting the quality of Western Australia's marine environment</i> , as amended from time to time, and available at <a href="http://www.epa.wa.gov.au">www.epa.wa.gov.au</a> .

Acronym or abbreviation	Definition or term
<b>National Cetacean Sighting Database</b>	The database maintained by the Commonwealth Department of Climate Change, Energy, the Environment and Water.
<b>Net scope 1 and 2 GHG emissions</b>	<p><b>Proposal GHG emissions</b> for a period less any reduction in GHG Emissions represented by the cancellation or retirement of <b>large-scale generation certificates</b> and <b>authorised offsets</b> which:</p> <ul style="list-style-type: none"> <li>(a) were cancelled or retired between the first day of the period until 1 March in the year after the period has ended;</li> <li>(b) have been identified in the report for that period as required by condition B7-5(1)(b)(iv);</li> <li>(c) have not been identified as cancelled or retired in the report for that period as required by condition B7-5(1)(b)(iv);</li> <li>(d) have not been used to offset any GHG emissions other than <b>proposal GHG emissions</b>; and</li> <li>(e) were not generated by avoiding <b>proposal GHG emissions</b>.</li> </ul>
<b>On-ground management</b>	This includes revegetation (re-establishment of native vegetation in degraded areas) and rehabilitation (in the context of repair of ecosystem processes including actions such as, but not limited to, management of weeds, disease, or feral animals) with the objective to achieve a tangible improvement to the environmental values in the offset area.
<b>Operations</b>	Operation of the plant and pipeline infrastructure for the proposal.
<b>Potential nesting trees</b>	Any existing tree of a species known to support black cockatoo breeding which has a diameter at breast height of 500 millimetres or greater that therefore may develop a nest hollow.
<b>Proposal GHG emissions</b>	<b>GHG emissions</b> released to the atmosphere as a direct result of an activity or series of activities that comprise/s or form/s part of the proposal, including scope 2 emissions from electricity consumption from the South West Interconnected System.
<b>Proposed Offset Conservation Areas</b>	Areas required to be spatially defined by condition B8-3(3) and proposed to receive offset measures.

Acronym or abbreviation	Definition or term
<b>Research offset</b>	A program or study that must be reasonably related to the impact and is designed to result in a positive conservation outcome. It may include improving the management and protection of existing conservation estate, adding to existing State Government initiatives, policies, or strategies, or addressing priority knowledge gaps.
<b>Regionally significant bushland</b>	All bushland (which may include wetland areas) within a Bush Forever area that meets the Bush Forever criteria for regional significance (Government of Western Australia 2000a and 2000b) <sup>1</sup> .
<b>Rehabilitate/ Rehabilitated/ Rehabilitation</b>	Rehabilitation in the context of re-establishing dune values / temporary cleared areas and recontouring / reconnecting disturbed dunes within the <b>Alkimos Dune Complex</b> to the maximum environmental value that is considered reasonable and to achieve the environmental objectives in condition B3-2 and requirements of condition B3-3.
<b>Relevant management body</b>	A party or parties that has a role in the establishment and/or ongoing management of the <b>Proposed Offset Conservation Area</b> . Note: This includes the role of the proponent.
<b>Revegetate/ Revegetation</b>	Re-establishment of native vegetation/habitat in degraded areas.
<b>Self-sustaining</b>	Refers to vegetation that can survive (continue indefinitely) without on-going management actions such as watering, weed control or infill planting.
<b>Significant marine fauna</b>	Includes cetaceans, penguin, and pinnipeds.
<b>South West Interconnected System</b>	The South West Interconnected System is a medium-sized power system serving the southwest region of Western Australia.
<b>Suitable nesting hollows</b>	Any hollow with dimensions suitable for use for nesting by <b>black cockatoos</b> . Characteristics of hollows used by each species is available in the SPRAT database <a href="http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl">http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl</a>

<sup>1</sup> Government of Western Australia 2000a, Bush Forever Volume 1, Western Australian Planning Commission, Perth, Western Australia.

Government of Western Australia 2000b, Bush Forever Volume 2, Department of Environmental Protection, Perth, Western Australia.



Acronym or abbreviation	Definition or term
<b>Suitable nesting trees</b>	Trees with <b>suitable nesting hollows</b> present, although no evidence of use.
<b>Tangible improvement</b>	A perceptible, measurable, and definable improvement that provides additional ecological benefit and/or value.
<b>Targeted flora survey</b>	The targeted flora survey results, and supporting spatial data described in the report <i>Alkimos Seawater Desalination Plant Project Pipeline Survey – Species Specific Targeted Flora Survey</i> (SLR Consulting 2023)
<b>Terrestrial development envelope</b>	The area shown within Figure 1 and defined by coordinates in Schedule 1.
<b>Threshold criteria</b>	The indicators that have been selected to represent limits of impact beyond which the environmental outcome is not being met.
<b>Trench/ Trenches/ Trenching</b>	Any excavation that is of sufficient depth that would cause vertebrate fauna to be become trapped and unable to escape and would include, but not be limited to, trenches, tunnels or pits for utilities, pipelines, dewatering or bell holes.
<b>Trigger criteria</b>	Indicators that have been selected for monitoring to provide a warning that if exceeded the environmental outcome may not be achieved.
<b>Vegetation Condition</b>	The condition of native vegetation rated in accordance with the <i>Technical guidance – Flora and vegetation surveys for environmental impact assessment (EPA 2016)</i> including any revision to this technical guidance.
<b>Westerly-facing berm</b>	As described in the proponents ERD p.192 "The western boundary [of the] seawater desalination plant development envelope incorporates a sand berm with a finished top surface level of approximately 30 mAHD. This berm effectively connects the existing southern and northern sand dunes and forms a visual barrier to the plant from the future western residential development."
<b>Zones of High Impact</b>	Areas within ten (10) m of the drilling sites for the marine seawater intake and wastewater discharge infrastructure.

## **Figures (attached)**

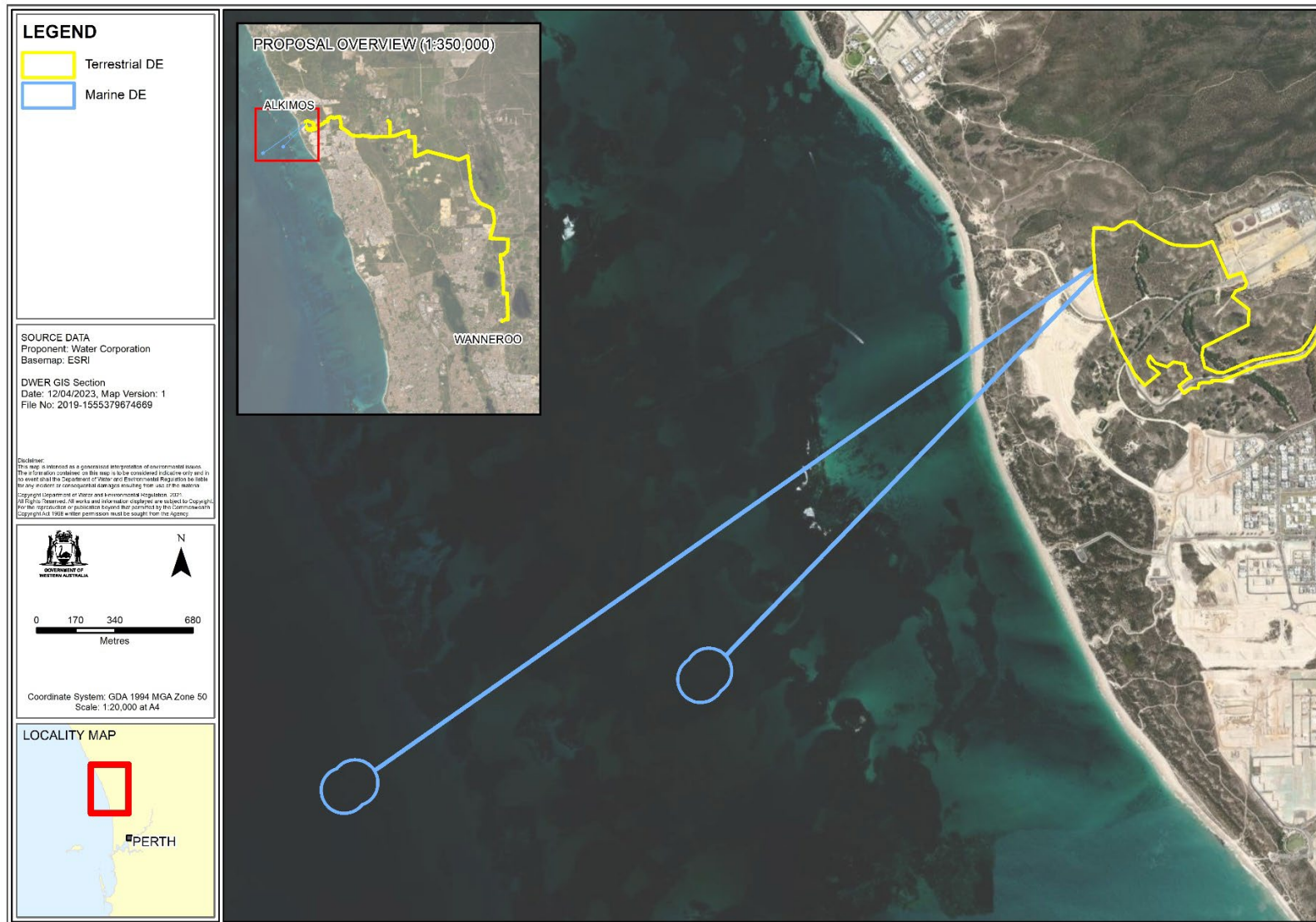
- Figure 1 Alkimos Seawater Desalination Plant terrestrial and marine development envelopes (This figure/map is a representation of the coordinates referenced in Schedule 1)
- Figure 2 Alkimos Seawater Desalination Plant marine development envelope (This figure/map is a representation of the coordinates referenced in Schedule 1)
- Figure 3 Potential occurrence of floristic community type 20a, required to be surveyed (This figure/map is a representation of the coordinates referenced in Schedule 1)

**Figure 1 Alkimos Seawater Desalination Plant terrestrial and marine development envelopes**





**Figure 2 Alkimos Seawater Desalination Plant marine development envelope**



**Figure 3 Potential occurrence of floristic community type 20a, required to be surveyed**



## **Schedule 1**

All coordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50, datum of Geocentric Datum of Australia 1994 (GDA94)).

Spatial data depicting the figures are held by the Department of Water and Environmental Regulation. Record no. DWERDT773469.