

Environmental Protection Act 1986

Section 43A

**NOTICE OF DECISION TO CONSENT TO CHANGE TO PROPOSAL DURING
ASSESSMENT**

PERSON TO WHOM THIS NOTICE IS GIVEN

Dr Digby Short
Manager Environment
Water Corporation (ABN: 28 003 434 917)
PO Box 100
LEEDERVILLE WA 6007

PROPOSAL TO WHICH THIS NOTICE RELATES:

Alkimos Seawater Desalination Plant
Assessment No. 2210

Pursuant to section 43A of the *Environmental Protection Act 1986* (EP Act), the Environmental Protection Authority (EPA) consents to the proponent making the following changes to the proposal during assessment without a revised proposal being referred:

- 1) Reducing the overall extent of native vegetation to be cleared, refinement of the indicative disturbance footprint, and reducing the overall extent of the development envelope.
- 2) Amendments to the key characteristics of the proposal

The updated key characteristics table and figure depicting the development envelope and indicative footprint are attached to this Notice.

EFFECT OF THIS NOTICE:

1. The EPA considers that the change is unlikely to significantly increase any impact that the proposal may have on the environment. The proponent may change the proposal as provided for in this notice.

RIGHTS OF APPEAL:

There are no rights of appeal under the EP Act in respect of this decision.

A handwritten signature in blue ink, appearing to read 'M. Tonts', with a long horizontal flourish extending to the right.

Professor Matthew Tonts
Delegate of the Environmental Protection Authority
CHAIR

6 April 2021

Schedule 1

Change to Proposal

Table 1: Summary of the Proposal

Proposal title	Alkimos Seawater Desalination Plant
Proponent name	Water Corporation
Short Description	The construction and operation of a 100 GL/a seawater desalination (ASDP) plant co-located with the 6 GL/a Eglinton Groundwater Treatment Plant (GWTP) including a 33.5 km pipeline to connect the plants into the Integrated Water Supply Scheme (IWSS) at Wanneroo Reservoir.

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

Element	Location	Proposed extent
<i>Physical elements</i>		
Total development envelope	Figures 1a and 1b	140.5 ha
Marine development envelope		12.2 ha
Alkimos seawater desalination plant development envelope		29 ha
Pipeline development envelope		99.3 ha
Wanneroo pipeline length		33.5 km
Wanneroo pipeline diameter (mm)	N/A	1400
<i>Operational elements</i>		
Total drinking water production	N/A	Nominal 100 GL/a (4 x 25 GL/a stages)
GWTP drinking water production		6 GL/a (Up to 30 ML/d for Stage 1 bores)

Element	Location	Proposed extent
SDP drinking water production		100 GL per annum (up to 320 ML/d at 100 GL/a)
SDP Intake volume		360 ML/d (at 50 GL/a) up to 720 ML/d (at 100 GL/a)
SDP Intake structure velocity		Maximum velocity 0.15 m/sec
SDP Outfall volume		210 ML/d (at 50 GL/a) up to 420 ML/d (at 100 GL/a)
SDP Outfall salinity		Up to 75,200 mg/L

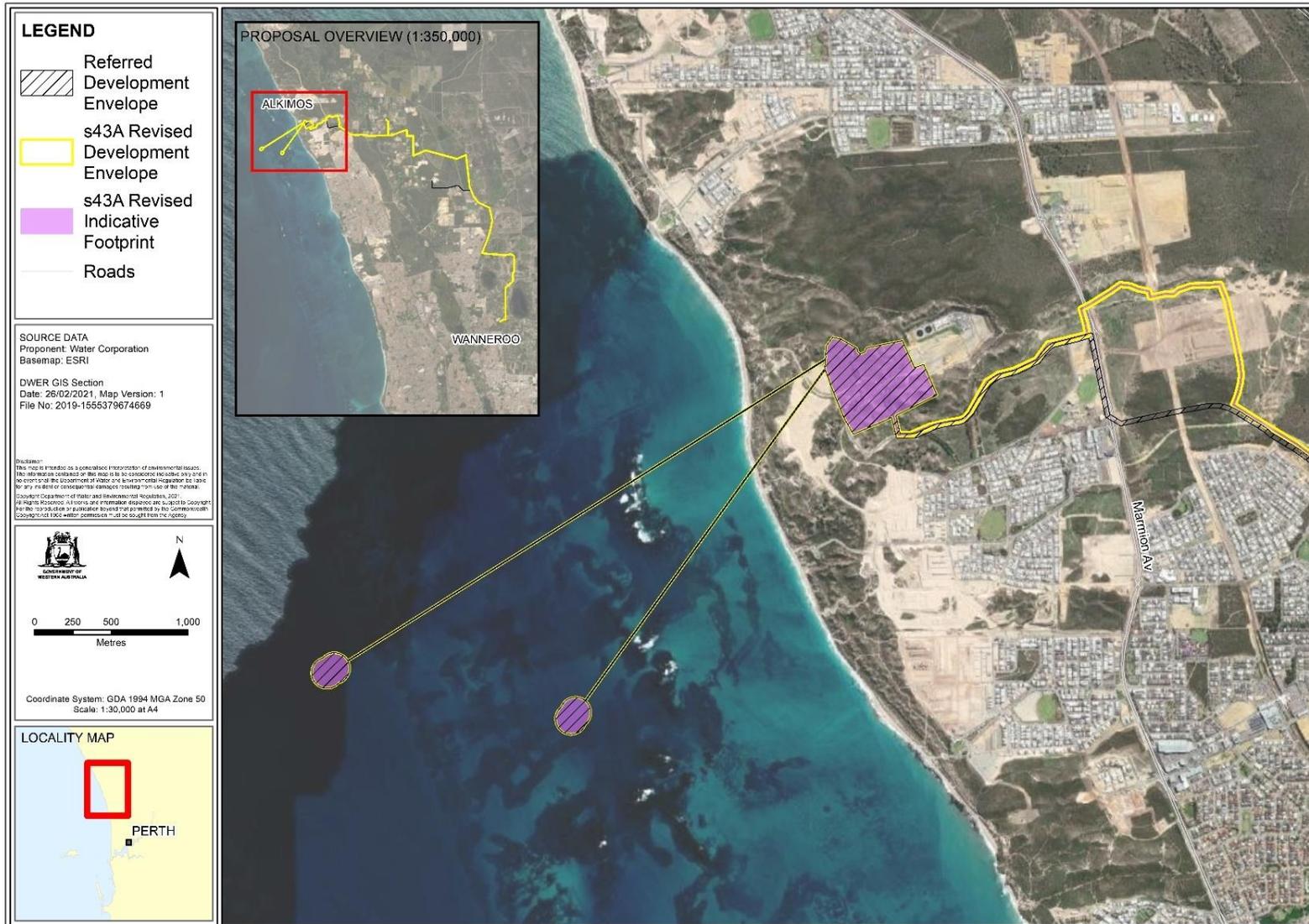


Figure 1a: Revised development envelope and indicative footprint



Figure 1b: Revised development envelope and indicative footprint (inset shows width of indicative footprint within development envelope).

Environmental Protection Act 1986

Section 43A

STATEMENT OF REASONS

CONSENT TO CHANGE PROPOSAL DURING ASSESSMENT

Proposal: Alkimos Seawater Desalination Plant

Proponent: Water Corporation

Decision

For the reasons outlined below, the Environmental Protection Authority (EPA) has determined to consent to the proponent changing the proposal outlined in Schedule 1 attached to this Statement of Reasons.

I have also determined that no consultation or public review is necessary when considering the request to consent to the change. The proponent's environmental review document incorporating the changes will be published for a four-week public review period and the changes to the proposal will be fully assessed in the EPA's Report and Recommendations to the Minister for Environment which will be subject to a two-week appeal period.

Background

On 12 April 2019, the Water Corporation referred the proposal to the EPA under section 38 of the *Environmental Protection Act 1986* (EP Act). The proposal included construction and operation of a 100 giga-litre per annum (GL/a) seawater desalination plant (SDP), a 6 GL/a groundwater treatment plant within the Alkimos water precinct site, marine intake and outlet pipes, and a water supply pipeline to the Wanneroo Reservoir with a spur pipeline to the Carabooda Tank site.

On 12 June 2019, the EPA determined to assess the proposal at the level of Public Environmental Review with a proponent prepared Environmental Scoping Document (ESD) with no public review period and an Environmental Review Document (ERD) with a four-week public review period. The ESD was approved on 8 May 2020. The ERD has not been submitted.

In advance of the EPA preparing a report on the outcome of its assessment of the proposal, the proponent has sought the EPA's consent to change the proposal.

Relevant Statutory and Administrative Provisions

Section 3.8 of the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016* guides what information the EPA requires from a person wanting to change its proposal during assessment.

The proponent is required to provide:

- details of the proposed change
- statement of the significance of the change
- rationale for the change.

Materials considered in making this decision

In determining whether to consent to the proponent changing the proposal the EPA has considered the following:

1. The proponents original Request to Change the proposal under section 43A of the EP Act (30 June 2020).
2. The proponents revised Request to Change the proposal under section 43A of the EP Act (9 February 2021).
3. Clarification emails supporting the proponents Request to Change the proposal under section 43A of the EP Act.
4. Spatial data provided by the proponent.
5. Supporting documentation for the proposal provided by the proponent at the time of referral.
6. EPA guidance and procedures.

Consideration

1. Nature of the proposed change

- a) Reducing the overall extent of native vegetation to be cleared, refinement of the indicative disturbance footprint, and reducing the overall extent of the development envelope.

The changes are a result of the proponent confirming the preferred pipeline alignment, removing elements not required, refinements to pipeline construction requirements, and results of the flora and fauna surveys required by the EPA.

The key changes to the development envelope are the removal of the Nowergup tank farm pipeline spur and a realignment of 2 kms of pipeline near the proposed SDP (Figures 1a and 1b). Clarification of the construction requirements for the pipeline have also resulted in changes to the development envelope. Flora and

fauna surveys have identified areas of significant ecological communities not previously identified at the time of referral.

The pipeline spur was removed as this component is not required. It may form part of a separate proposal as part of the Nowergup tank farm, if the infrastructure is required in the future. The realignment of the pipeline was required to allow a portion of the pipeline to be installed within a common trench and to reduce congestion of utilities along Romeo Road. Changes to the construction requirements were to provide for a wider footprint for trenching and installation of the pipeline.

The changes will result in an overall decrease in the extent of the development envelope from 155.7 ha to 140.5 ha, which in turn reduces the overall extent of native vegetation to be cleared, from 46.5 ha to 44.5 ha (2 ha decrease).

b) Amendments to the key characteristics of the proposal

The proponent has provided a revised key characteristics table and a table of changes to environmental impacts. The tables describe the changes to the proposed extent of the development envelope, disturbance footprint, native vegetation clearing and pipeline length.

The changes to the key characteristics of the proposal are highlighted with bold text in the attached key characteristics table (Schedule 1) with the revised development envelope depicted in Figures 1a and 1b.

2. Stage of the assessment process

On 12 June 2019, the EPA set the level of assessment for the proposal as Public Environmental Review (4-week public review). The EPA had approved the proponent prepared ESD and was awaiting the Environmental Review Document (ERD) when the request was made to change the proposal.

3. Currency, relevance, and reliability of the information, including submissions

The proposal was referred to the EPA in April 2019 and much of the information submitted in support of the referral, not superseded by additional information, remains current, reliable, and relevant. Additional information on the changes to the proposal, as requested by EPA Services, was provided between August 2020 and February 2021.

The spatial data set used by the proponent to define the Alkimos dune system geoheritage site has been identified as being incorrectly located immediately adjacent to the north of the actual geoheritage site. This spatial data set is managed by the Department of Mines, Industry Regulation and Safety (DMIRS). DMIRS is currently updating the data set to map the correct location of the Alkimos dune system geoheritage site. An updated assessment of the impacts to the Alkimos dune system will be provided in the ERD.

The Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain ecological community (Tuart woodlands and forests) was listed as

Critically Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in June 2019, after referral of the proposal. The community is considered a Priority Ecological Community by the Department of Biodiversity, Conservation and Attractions. Flora and fauna surveys have clarified the potential impacts to this community and identified that the proposed changes will not result in a change to the extent of impact to Tuart woodlands and forests, when compared to the original referral. An assessment of the significance of impacts to the Tuart woodlands and forests will be provided in the ERD.

4. Community engagement

The proponent has engaged widely with the community in relation to the original proposal, including engagement with government agencies, key stakeholders, and community groups between 2017 and 2019.

Several different community events have been held and the proponent provides regular updates on the proposal via their website. Feedback from the stakeholders and the community has been considered by the proponent and elements have been incorporated into the proposal's design.

The proponent has continued to consult with stakeholders since referral of the proposal. The EPA intends to publish information on the proposed changes for public information as part of the assessment process.

5. Level of public concern

The EPA advertised the referral information for public comment from 15 May 2019 to 21 May 2019 (inclusive). Nine comments were received during the public comment period, a low level of public interest at referral stage. The majority of public submissions requested the proposal either not be assessed or assessed at the level of public environmental review. The EPA does not consider that the proposed changes would result in an increased level of interest in the proposal.

Consideration of Whether the Change is Unlikely to Significantly Increase Any Impact that the Proposal May Have on the Environment

The following were considered:

1. Values, sensitivity, and the quality of the environment which is likely to be impacted

The changes are primarily associated with the alignment and construction requirements of the pipeline from the SDP to the Wanneroo Reservoir. Twenty of the twenty three native vegetation types recorded within the development envelope, were recorded in the pipeline corridor. The native vegetation that will be impacted by the proposed changes is similar in type and condition to that of the referred proposal.

The proposed changes will impact a similar number of Threatened and Priority Ecological Communities to the referred proposal. Additional flora and fauna surveys identified that the Tuart (*Eucalyptus gomphocephala*) woodlands and forest of the Swan Coastal Plain Commonwealth listed TEC will be impacted by the proposal. This community was not listed at the time of the referral.

The extent of impact to Bush Forever and other conservation areas will increase as a result of the proposed changes. However, no additional Bush Forever sites or other conservation areas that would not have been impacted by the referred proposal will be impacted by the proposed changes.

The preferred northern option of the pipeline alignment east of Marmion Avenue has the potential to impact on the Alkimos Dune System, a listed geoheritage area. Construction of the SDP has the potential to impact on areas of Quindalup dunes.

The proposed changes will result in a decrease in the extent of impact to suitable foraging habitat for listed species of black cockatoo. No additional areas of fauna habitat suitable for conservation significant species is expected from the proposed changes. A total of 77 black cockatoo potential breeding trees have been identified within the proposed disturbance footprint, none known to contain hollows.

No additional areas of Conservation Category Wetlands will be impacted by the proposed changes.

No threatened or priority listed flora species were recorded within the development envelope as referred or as proposed. The majority (over 76 per cent) of the vegetation within the pipeline development envelope is in 'completely degraded' or 'degraded' condition.

The key environment factors for the proposal are:

- Marine Environmental Quality
- Benthic Communities and Habitats
- Marine Fauna
- Social Surroundings
- Flora and Vegetation
- Terrestrial Fauna
- Landforms
- Air Quality.

The proposed changes give no cause for additional environmental factors to be considered as key environmental factors for the purposes of the EPA's assessment of the proposal.

The changes have the potential to impact on Flora and Vegetation and Terrestrial Fauna.

2. Extent (intensity, duration, magnitude and geographic footprint) of the likely impacts

In summary, the proposed change to the development envelope will reduce the overall areas covered by the proposal by 15.2 ha, from 155.7 ha to 140.5 ha (a 10 per cent decrease). The overall extent of native vegetation clearing has also decreased by 2 ha, from 46.5 ha to 44.5ha (or 4 per cent).

The overall or net changes to clearing native vegetation are from changes to the location and distribution of clearing along the pipeline route. A summary of the reductions and increase in clearing are set out below.

Areas where there will be reductions in clearing

The proposed changes will result in a decrease in the extent of clearing of the Threatened Ecological Community (TEC) *Melaleuca huegelii-Melaleuca systema* shrublands on limestone ridges (3.9 ha to 3.2 ha), the Priority Ecological Community (PEC) *Acacia* shrublands on taller dunes, Southern Swan Coastal Plain (25.8 ha to 24.2 ha) and black cockatoo foraging habitat (26.7 ha to 21.9 ha).

Areas where there will be an increase in clearing

There are four areas or locations where there will be an increase in clearing of native vegetation. These are as follows:

- The extent of clearing within Bush Forever will increase from 4.8 ha to 9.5 ha as a result of the increase in the pipeline construction footprint to 30 metres along the entire pipeline corridor to address safety requirements. This is unlikely to significantly increase the impact to Bush Forever because the number of Bush Forever sites impacted has been reduced by the removal of the Nowergup tank pipeline spur. No new Bush Forever sites are intersected by the pipeline as a result of the change. The majority of the pipeline is located on the boundary of Bush Forever sites along existing roads or access tracks, which have experienced ongoing edge effects.
- The extent of clearing to Banksia woodlands of the Swan Coastal Plain (Banksia woodlands) will increase from 1.9 ha to 3.3 ha as a result of the increase in the pipeline construction footprint to 30 metres along the entire pipeline corridor to address safety requirements and updated survey information. The proposed changes are unlikely to significantly increase the impact to Banksia woodlands because the number of Banksia woodlands areas impacted has been reduced by the removal of the Nowergup tank pipeline spur. No new Banksia woodlands areas are intersected or fragmented by the pipeline.
- The extent of clearing to potential black cockatoo breeding trees will increase from 65 trees to 77 trees as a result of the increase in the pipeline construction footprint to 30 metres along the entire pipeline corridor to address safety requirements and updated survey information. This is unlikely to significantly increase the impact to black cockatoos because the number of areas containing black cockatoo breeding trees has been reduced overall by the removal of the Nowergup tank pipeline spur. No additional areas containing black cockatoo breeding trees are intersected or fragmented by the pipeline.

- There is an increase of 0.27 ha in the development envelope within a conservation area, of which less than 0.01 ha is within the proposed disturbance footprint. Conservation area '10b' is required under Ministerial Statement 722. The extent of impact to conservation area 10b was not specified at the time of referral, although impacts were expected. The proposed change to the proposal is unlikely to significantly increase the impact to conservation area 10b because the area to be impacted by the proposed change has a small extent and is on the periphery of the conservation area adjacent to an existing road.

The intensity and duration of the likely impacts of the proposed changes is not expected to change significantly from those of the proposal as referred.

3. Consequence of the likely impacts (or change)

The consequences of the likely impacts of the proposed changes are not expected to be significantly greater than those of the original proposal given the decrease in the development envelope and reduction in the extent of native vegetation to be cleared.

The consequences from the proposed increase in impacts to Bush Forever, Banksia woodlands, black cockatoo habitat and conservation area 10b are likely to be similar and not significantly greater than the potential consequences of the original proposal.

The proposed increases in impacts are not occurring in new locations of the identified values and are primarily located along existing roads and access tracks. While the proposed changes will result in an increase in the extent of clearing required along existing linear infrastructure, the proposed increases will not result in the loss or fragmentation of any occurrence and will maintain existing consolidated areas of bushland. The northern realignment of the pipeline will intersect fewer occurrences of black cockatoo habitat and Banksia woodland, thereby potentially decreasing the consequence of the impacts of the proposal.

The overall significance of the impacts of the proposal to native vegetation and black cockatoo breeding trees will be assessed by the EPA.

4. Resilience of the environment to cope with the impacts or change

The EPA considers that the resilience of the environment to cope with the changed proposal remains unchanged from that of the original proposal, should it be implemented.

5. Cumulative impacts with other projects

Cumulative impacts will be considered in the assessment of the changed proposal. The decrease in the extent of the development envelope and native vegetation clearing will not increase the cumulative impact of the proposal.

6. Connections and interactions between parts of the environment to inform holistic view of impacts of the whole environment

A holistic assessment of the changed proposal will be undertaken during the EPA's assessment of the proposal. The changed proposal is not expected to result in a significant change in impact to the ecological function and values of the areas compared to what it would be if the original proposal were to be implemented.

7. Level of confidence in the prediction of impacts and the success of proposed mitigation

There is no change in the level of confidence in the predicted impacts or the success of proposed mitigation as a result of the changes.

8. Public interest about the likely effect of the proposal, if implemented, on the environment, and public information that informs the EPA's assessment

The EPA is of the opinion that public interest in the proposal will likely remain the same and notes that the ERD, including the revised information, will be published for a four-week public review period.

Conclusion

The EPA considered the level of significance of the increases in impacts to environmental values and noted the decreases in impacts in other areas. On balance the EPA considered that:

- The proposed changes will result in an overall reduction in the extent of clearing of native vegetation.
- The small extent and nature of the areas where impacts will increase is unlikely to significantly alter the consequence of the proposal on the impacted environmental values.
- No additional areas would be impacted by the changes to the development envelope or increase in the disturbance footprint for pipeline installation.

For the reasons stated above, the EPA considers that the proposed changes are unlikely to significantly increase any impact that the proposal may have on the environment.

Schedule 1

Change to Proposal

Table 1: Summary of the Proposal

Proposal title	Alkimos Seawater Desalination Plant
Proponent name	Water Corporation
Short Description	The construction and operation of a 100 GL/a seawater desalination (ASDP) plant co-located with the 6 GL/a Eglinton Groundwater Treatment Plant (GWTP) including a 33.5 km pipeline to connect the plants into the Integrated Water Supply Scheme (IWSS) at Wanneroo Reservoir.

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

Element	Location	Referred extent	Proposed extent	Change
<i>Physical elements</i>				
Total development envelope	Figures 1a and 1b	155.7 ha	140.5 ha	15.2 ha decrease
Marine development envelope		16.7 ha	12.2 ha	4.5 ha decrease
Alkimos seawater desalination plant development envelope		29 ha	29 ha	No change
Pipeline development envelope		110 ha	99.3 ha	10.7 ha decrease
Pipeline length		35 km	33.5 km	1.5 km decrease
Pipe diameter (mm)	N/A	1400	1400	No change
<i>Operational elements</i>				
Total drinking water production	N/A	Nominal 100 GL/a (4 x 25 GL/a stages)	Nominal 100 GL/a (4 x 25 GL/a stages)	No change
GWTP drinking water production		6 GL/a (Up to 30 ML/d for Stage 1 bores)	6 GL/a (Up to 30 ML/d)	No change

Element	Location	Referred extent	Proposed extent	Change
			for Stage 1 bores)	
SDP drinking water production		100 GL per annum (up to 320 ML/d at 100 GL/a)	100 GL per annum (up to 320 ML/d at 100 GL/a)	No change
SDP Intake volume		360 ML/d (at 50 GL/a) up to 720 ML/d (at 100 GL/a)	360 ML/d (at 50 GL/a) up to 720 ML/d (at 100 GL/a)	No change
SDP Intake structure velocity		Maximum velocity 0.15 m/sec	Maximum velocity 0.15 m/sec	No change
SDP Outfall volume		210 ML/d (at 50 GL/a) up to 420 ML/d (at 100 GL/a)	210 ML/d (at 50 GL/a) up to 420 ML/d (at 100 GL/a)	No change
SDP Outfall salinity		Up to 75,200 mg/L	Up to 75,200 mg/L	No change



Figure 1a: Revised development envelope and indicative footprint



Figure 1b: Revised development envelope and indicative footprint (inset shows width of indicative footprint within development envelope).