



**Environmental  
Protection  
Authority**

**Alkimos Wastewater Treatment Plant Site B  
– inquiry under section 46 of the  
*Environmental Protection Act 1986*  
to amend Ministerial Statement 755**

**Water Corporation**

Report 1707  
September 2021

## **Inquiry under section 46 of the *Environmental Protection Act 1986***

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of changing schedule 1 (condition 1 requires the implementation of schedule 1) and condition 12 (Odour Management Plan) of Ministerial Statement 755 relating to the Alkimos Wastewater Treatment Plant - Site B proposal.

Section 46(6) of the *Environmental Protection Act 1986* requires the EPA to prepare a report that includes:

- (a) a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be changed
- (b) any other recommendations that it thinks appropriate.

The following is the EPA's report to the Minister pursuant to s. 46(6) of the *Environmental Protection Act 1986*.



**Prof. Matthew Tonts**  
Chair

17 September 2021

# Contents

1	Proposal.....	1
2	Requested changes to the conditions .....	3
3	Inquiry into changing the conditions.....	4
4	Inquiry findings .....	5
4.1	Social surroundings.....	5
5	Conclusions and recommendations .....	14
6	Other advice.....	16
	Appendix A: Recommended conditions .....	17
	Appendix B: Identified decision-making authorities.....	20
	References .....	21

# 1 Proposal

The Alkimos Wastewater Treatment Plant – Site B proposal (the proposal) is for the construction and operation of a wastewater treatment plant, and associated ocean outfall, on the Alkimos-Eglinton Dunal System with an ultimate processing capacity of 160 megalitres per day (ML/day). The proponent is the Water Corporation.

The Environmental Protection Authority (EPA) assessed the proposal at the level of Public Environmental Review and published its report in November 2006 (Report 1239). In this report, the EPA considered the following key environmental factors were relevant to the proposal:

- Biodiversity (terrestrial and marine)
- Marine – offshore disposal of treated wastewater
- Odour.

In applying the *Statement of Environmental Principles, Factors and Objectives* (EPA 2020b) these factors are now represented by:

- Flora and vegetation
- Benthic communities and habitats
- Marine environment quality
- Social surroundings.

The EPA concluded in Report 1239, that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions, including the proponent's commitments.

The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement (MS) 755 on 12 November 2007.

The EPA also assessed the related Alkimos – Eglinton Metropolitan Region Scheme (MRS) Amendment No. 1029/33 (Amendment 1029/33) at the level of Environmental Review and published its report in November 2005 (Report 1207). Amendment 1029/33 of the MRS included modifying reservations and zonings for a range of land use changes including Water Corporation's proposal. In this report, the EPA considered the following key environmental factors were relevant to the proposal:

- Vegetation
- Fauna
- Odour
- Geoheritage
- Aboriginal heritage
- Risk.

In applying the *Statement of Environmental Principles, Factors and Objectives* (EPA 2020b) these factors are now represented by:

- Flora and vegetation
- Terrestrial fauna
- Landforms
- Social surroundings.

The EPA concluded in Report 1207, that Amendment 1029/33 would, in part, be inconsistent with the conservation and protection of significant environmental and geoh heritage values in the area. The EPA therefore recommended conditions to adequately protect these values, which included a 600-meter buffer around the boundary of the wastewater treatment plant to address odour.

The then Minister for Environment approved the scheme amendment, subject to the inclusion of conditions of MS 722 on 24 April 2007 in the MRS.

### Previously approved changes to the proposal

In 2008, Attachment 1 to MS 755 was issued to authorise a 15.3 hectare (ha) increase in temporary vegetation clearing, from 29 ha to 44.3 ha. This included a requirement to rehabilitate 26.2 ha, which left 18.1 ha of permanent disturbance. Further details of this change are provided in Attachment 1 to MS 755.

There have been no changes to MS 722.

### Previously approved changes to the conditions

There have been no changes to the implementation conditions since Ministerial Statements 722 and 755 were issued.

## 2 Requested changes to the conditions

In November 2020, the proponent requested the following changes to the implementation conditions of MS 755:

- amend schedule 1 to allow odour venting through other suitable methods.
- contemporise condition 12 to provide flexibility for future advancements in odour management that were not considered during the original assessment and allow for more appropriate regulation of odour emissions.

In January 2021, the Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions of MS 755 for the proposal.

This report satisfies the requirements of the EPA's inquiry.

### 3 Inquiry into changing the conditions

The EPA has discretion as to how it conducts this inquiry. In determining the extent and nature of this inquiry, the EPA had regard to information such as:

- the scope of the Minister for Environment's request to the EPA
- the currency of its original assessments (Reports 1239 and 1207) with respect to odour
- Ministerial Statements 755 and 722
- information provided by the proponent (Water Corporation 2020a, Water Corporation 2020b, Water Corporation 2020c)
- advice from relevant decision-making authorities.

#### EPA procedures

The EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* (State of Western Australia 2016) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2020a).

## 4 Inquiry findings

The EPA considered that social surroundings is the key environmental factor relevant to the change to the conditions.

### 4.1 Social surroundings

The EPA's environmental objective for social surroundings is *to protect social surroundings from significant harm*.

#### Conclusions from EPA Report 1207 (Alkimos – Eglinton MRS Amendment 1029/33)

In Report 1207 the EPA deferred the assessment of odour from the proposal due to the broad scale of the assessment and because insufficient detailed information was available at the early stage of the planning process to amend the MRS (the detailed assessment of odour was undertaken in EPA Report 1239, discussed below).

Amendment 1029/33 proposed an odour buffer around the Alkimos Wastewater Treatment Plant (AWWTP) of 450m. An additional buffer of 150m was proposed as zoned Urban Deferred to allow the exact edge of the buffer to be determined once the AWWTP was operating and the actual extent of the odour can be measured. Site B is situated in a depression within the Alkimos dune system. The then Department of Environment raised the issue of odour ponding occurring within the depression. Following further odour modelling work, the Water Corporation requested an 800m buffer to the west and north west of the AWWTP to accommodate the effects of odour ponding with a 600m buffer being provided elsewhere.

The EPA recommended in EPA Report 1207 that:

- a 600m buffer measured from the boundary of the AWWTP should be reserved for Public Purposes, to prevent the siting of odour sensitive land uses within an area likely to be impacted by unacceptable odour levels from the AWWTP
- an odour channel be provided if the site for the AWWTP is likely to experience odour ponding
- an 800m buffer west and north west of the AWWTP measured from the boundary of the AWWTP should be reserved for Public Purposes if the site is subject to ponding and an odour channel is not provided
- the possibility of reducing the width of the buffer to less than 600m through odour control and management, be evaluated further as part of the section 38 assessment of the AWWTP (assessment undertaken in EPA Report 1239)
- responsibility should rest with the Water Corporation for ensuring that the AWWTP operates to the required criteria within the recommended 600m Public Purpose reserve.



To manage these impacts, the EPA recommended that prior to finalisation of the scheme the following land should be reserved:

- **Statement that a scheme may be implemented – Metropolitan Region Scheme Amendment 1029/33**

Specifications for relocation of the AWWTP and additional land to be reserved

**1-1 Public Purpose Reserve surrounding the Waste Water Treatment Plant**

A 600 metre-wide buffer measured from the boundary of the Waste Water Treatment Plant shall be reserved for public purposes to the requirements of the Western Australian Planning Commission on advice of the Environmental Protection Authority, and shall only be used for complementary purposes.

### Conclusions from EPA Report 1239 (Alkimos Wastewater Treatment Plant - Site B)

In EPA Report 1239 the EPA noted that the proponent will incorporate odour control in the AWWTP as the plant develops in stages and that Amendment 1029/33 had been Gazetted (7 July 2006), providing a Public Purpose Reserve buffer of 600m. The EPA considered that buffer areas should not be viewed as an alternative to providing best practicable emission controls and appropriate management practices. The EPA expected the proponent to manage the odours by the implementation of best practice design and operation and contain unacceptable impacts within the gazetted Public Purpose Reserve buffer of 600m.

Having particular regard to the:

- odour minimisation strategy over time, and opportunity to periodically review the Part V licence, as the plant increases in capacity
- modelling methods used
- Odour Management Plan, as per condition 11,

it was the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for odour.

The EPA provided other advice in EPA Report 1239 noting that up to 40 ML/day of treated wastewater is proposed to be discharged via the outfall pipe by 2020 with an ultimate design of 160 ML/day beyond 2050. The EPA advised that it may not be possible for the proponent to develop the plant to full capacity and still be able to contain odour impacts within land they control.

The EPA also advised that licences established under Part V of the *Environmental Protection Act 1986* (EP Act) would need to be reviewed and re-assessed to determine whether wastewater discharge to marine waters and odour management is environmentally acceptable for each stage of development of the AWWTP. The EPA recommended a re-assessment should occur when the plant reaches a capacity of 40 ML/day and periodically thereafter.

To manage these impacts, the EPA recommended the following conditions:

- **11 Odour Management Plan**

- 11-1 At least six months prior to commencement of operation, the proponent shall prepare an Odour Management Plan to manage the impacts of odour on health and amenity, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall address the following:

1. an initial dynamic olfactometry determination;
2. the biofilter acclimation period;
3. procedures for the replacement of the biofilter media;
4. regular checks of biofilter loading to ensure that the biofilter is balanced and to identify any short circuits (e.g. surface flow rate measurements and smoke tests);
5. the size of the stack;
6. compliance with the buffer–odour criteria to determine/trigger when appropriate remedial actions are required;
7. regular qualitative determination of odour from the facility;
8. odour surveys every five years;
9. contingency plans during upset or maintenance conditions;
10. contingency plans in the event of exceedances;
11. complaint registration, investigation and response; and
12. future avenues of Odour Reduction Technology which the plant may use (note: if the technology comprises of a process which will cause an environmental impact, it must be reviewed by the Environmental Protection Authority).

Odour related characteristics in Table 1 of Schedule 1 were defined as:

Table 1: Summary of Key Proposal Characteristics relevant to odour emissions:

<b>Characteristic</b>	<b>Site B</b>
Treatment Process	Wastewater will be treated to an advanced secondary standard most likely based upon the activated sludge process similar to that recently constructed at Woodman Point WWTP, achieving a high degree of nitrogen removal. Additional treatment processes will be utilised to make the treated wastewater “fit for purpose” for disposal and re-use opportunities as and when they become available/viable. Odours will be vented via an approximately 50m tall stack.
Odour Buffer	A 600m Public Purpose Reserve Buffer as gazetted (WAPC, 2006) on 7 July 2006.

## Appeals 420–425 of 2006

Appeal Report 420–425 of 2006 and the then Minister’s Appeal Decision Report 420–425 (the Appeal Decision) dismissed the odour related appeals. Following consultation with the Ministerial decision-making authorities, following additional conditions were introduced into the Ministerial Statement:

- **12 Odour Management Plan**

- 12-6 The proponent shall operate the plant at all times to ensure that odour at all adjacent odour sensitive premises meets criterion for odours set out in condition 12-7.
- 12-7 The odour criterion referred to in Condition 12-6 shall be 5 odour units (OU) (based on the 99.9 percentile 1 hour averaging Australia Standard OU) or as specified by the CEO from time to time through amendment of the operating licence issued under Part V of the EP Act.

## Assessment of the requested change to conditions

The EPA considered that the *Environmental Factor Guideline – Social Surroundings* (EPA 2016) is the current environmental policy and guidance relevant to its assessment of the proposed change to conditions for this factor. The EPA’s objective for social surroundings is *to protect social surroundings from significant harm*.

### *Current situation*

The AWWTP is currently in stage 1 with a design capacity of 20 ML/day. The current throughput is approximately 12 ML/day.

Active odour management such as covering oxidations ditches and venting odours through a stack, and the 600m zoned Public Purpose reserve odour buffer are the two key aspects of odour management at the AWWTP. All odour emissions are currently vented via a stack, as required by schedule 1 in MS 755. The AWWTP is a prescribed premises and licenced (L8434/2010/1) under Part V of the EP Act.

The proposal was structured to be completed in a staged approach, to account for the gradual increase in wastewater flows from a number of planned residential developments in the Alkimos-Eglington region. This staged approach would be able to take advantage of advancements in odour management in future stages, particularly when the plant reaches 40 ML/day throughput.

Water Corporation recently submitted a works approval application to the Department of Water and Environmental Regulation (DWER) for the construction of additional treatment infrastructure, including a third oxidation ditch, to increase the design capacity to allow up to 26 ML/day. This proposed increase is within the original referred proposal capacity and the authorised limit in schedule 1 of MS 755 of 160 ML/day.

Water Corporation submitted a revised Odour Management Plan (2020) with its application to replace the current approved 2010 version of the plan. The 2020 plan specifies how proposed changes to odour venting and odour from increased throughput to 26 ML/day will be monitored and managed.

During assessment of Water Corporation's works approval, DWER noted the third oxidation ditch would be uncovered. Existing oxidation ditches 1 and 2 are covered and vent odour emissions through a stack in accordance with schedule 1 (Table 1) of MS 755. The proposed new uncovered ditch 3 would not be consistent with schedule 1 because it proposes to passively vent odours without the stack. DWER was unable to proceed with its assessment of the works approval until MS 755 allowed for different odour management.

The EPA's assessment of the proposed change to conditions with respect to the two items in the Minster for Environment's request under section 46 is set out below.

*Condition 1 - Amend a key proposal characteristic in schedule 1 regarding venting of odours through a stack*

To demonstrate the AWWTP can vent odours through other suitable methods, and that increasing throughput to 26 ML/day would not cause potential significant additional or different impacts to the surrounding sensitive receptors, Water Corporation engaged technical specialist consultants to undertake an Odour Risk Assessment (the Odour Assessment). The Odour Assessment included field monitoring, source assessments, odour analysis and dispersion modelling in accordance with DWER's *Odour Emissions Guidelines* (DWER 2019) (the Odour Guidelines). The proponent's Odour Assessment concluded:

- no significant increase in odour impacts is expected with 26 ML/day when compared to existing operations
- the 5 Odour Unit 99.9 percentile 1 hour criterion at the 600m buffer boundary is predicted to still be met, as required by conditions 12-6 and 12-7 of MS 755
- there were no proposal related odours detected at sensitive receptor locations, consistent with Water Corporation's record of zero odour complaints from the surrounding community since operations commenced in 2011
- the last community phone survey was undertaken in 2017 with no odour issues attributable to the proposal
- current odour controls are effective with 95% of field monitoring measurements not observing odour at the facility boundary (well within the 600m buffer boundary).

The EPA notes advice from DWER that it has no objections to the removal of the requirement for ditch 3 to be covered and vented through the 50m stack because:

- it represents a low risk of impacting amenity at nearby sensitive receptors
- these source types typically emit low concentration odour plumes which disperse in a short distance.

Based on the modelling undertaken by Water Corporation and the advice from DWER, the EPA recommends the schedule 1 requirement in MS 755 to vent odours through a 50m stack be deleted and replaced with a new condition (condition 12-10). This new condition would require operational odours to be vented through a stack until such time as a Part V works approval and/or amended licence is issued by

DWER specifying the manner in which operational odour can be vented from the proposal.

When a Part V works approval and/or amended licence is issued, recommended condition 12-10 would then allow Water Corporation to vent operational odours in a manner as specified in Part V instruments. Water Corporation could then operate ditch 3 uncovered and passively vent these odours without the stack and ensure odour venting methods and emissions are appropriately regulated by Part V.

To further reduce potential odour impacts consistent with the EPA's objective for social surroundings, the EPA recommends a new condition 12-9 which requires Water Corporation to ensure odour emissions, regardless of venting method, do not unreasonably interfere with the welfare, convenience, comfort or amenity of any sensitive receptor outside of the proposal's 600m zoned Public Purposes Reserve area.

The EPA's approach to the conditions ensures there are no regulatory time gaps during the infrastructure upgrades and applies an outcome-based condition avoiding impacts to sensitive receptors outside of the 600m zoned buffer. The approach also complements appropriate ongoing regulation applied by DWER through Part V for future advancements in odour management technology for each incremental increase in capacity from future upgrades.

*Condition 12 - Review the suitability of condition 12 in light of the proposed change to schedule 1 and having regard to the licence requirements under Part V of the EP Act*

The existing condition 12 (conditions 12-1 to 12-7) needs to be updated. For example, biofilters as a means of managing odour are detailed when there are now more advanced technologies available such as photo-ionisation units (which were installed and licenced). Therefore the EPA supports replacing conditions 12-1 to 12-7 with ongoing regulation by DWER through Part V of the EP Act. This approach would provide flexibility for future advancements in odour technology that were not considered during the original assessment and allow for more appropriate regulation of odour emissions through Part V of the EP Act.

As mentioned above, the EPA's recommended conditions on the proposal are now outcome based, focusing on protecting sensitive receptors outside of the buffer zone instead of prescribing odour treatment methods and management. Removing the current prescriptive implementation conditions allows Water Corporation to work with DWER on appropriate odour treatment methods and management as technology continues to advance over the life of the proposal.

The EPA notes DWER's advice supporting odour regulation under Part V and removal of current MS 755 odour related conditions. The EPA notes DWER's advice that:

- Other similar wastewater treatment plants in the Perth/Peel region are regulated under Part V and include regulation of odour emissions.
- The works approval to install new infrastructure will include conditions to regulate odour.

- Once installation works are completed, the current licence will be amended to include odour conditions for ongoing operations up to 26 ML/day, including requirements in accordance with DWER's Odour Guideline, such as an Odour Management Plan.
- Supports the removal of MS 755 conditions relating to:
  - Criterion modelling and compliance with 5 Odour Unit 99.9<sup>th</sup> percentile 1 hour criteria. The recently updated Odour Guidelines state criteria modelling is no longer accepted by DWER for impact odour assessment purposes due to large associated uncertainties. Instead DWER supports continuous point source monitoring of odour emissions as standard regulatory practice (point source monitoring of hydrogen sulphide will be a conditioned requirement in amended licence L8434/2010/1).
  - Biofilter installation and maintenance. Biofilters are outdated technology and were never installed by the proponent. Instead, photo-ionisation units were installed and licenced.
  - ongoing odour regulation in the amended licence (L8434/2010/1) to be appropriate to allow greater flexibility in conditioning future treatment methods and management, but with Part IV conditions continuing regulation until conditions under Part V are in place.

The EPA recommends deleting condition 12-1 (Odour Management Plan) as DWER has advised an Odour Management Plan specific to operations up to 26 ML/day, will be a conditioned requirement of the amended L8434/2010/1. However, the EPA only recommends condition 12-1 cease to have effect in the event that the works approval to increase throughput is issued or the licence is amended, and contains odour requirements.

Replacing condition 12-2 (Odour Management Plan objective) with new outcome-based condition 12-9 is also recommended as they require the proponent to manage odour emissions from the proposal to ensure the following outcome is achieved:

- odour emissions do not unreasonably interfere with the welfare, convenience, comfort or amenity of any sensitive receptor outside of the proposal's zoned Public Purposes Reserve area as shown in the Alkimos – Eglinton Metropolitan Region Scheme.

The EPA recommends deleting conditions 12-3, 12-4 and 12-5 as these requirements are either outdated (biofilters), completed (stack size and initial olfactory determination) or will be regulated by Part V (trigger mechanisms and odour monitoring).

The EPA also recommends deleting conditions 12-6 and 12-7 (odour criterion). The EPA notes DWER's advice that the recently updated Odour Guidelines state criteria modelling is no longer accepted by the department for impact odour assessment purposes due to large associated uncertainties. Instead DWER supports continuous point source monitoring of odour emissions as standard regulatory practice. Point source monitoring of hydrogen sulphide is likely to be a conditioned requirement in amended L8434/2010/1.

In the event the new Ministerial Statement is published, DWER advised it can finalise its assessment of Water Corporation's works approval. As stated above, the works approval and amended L8434/2010/1 is likely to include odour conditions specific for up to 26 ML/day throughput.

The EPA's recommended condition 12-10 ensures the existing odour conditions in MS 755 still have effect until the works approval or amended licence is issued, once issued the odour conditions in MS 755 will cease to have effect and the new Ministerial Statement conditions will simultaneously take effect. The EPA's recommended conditions have been structured in close consultation with DWER to ensure there is no interruption in regulation of odour emissions during the time between publishing a new Ministerial Statement and issuing of the works approval or the amended L8434/2010/1.

#### *Potential for DWER to assess and regulate potential odour impacts under Part V of the EP Act*

The EPA notes Part V of the EP Act provides for works approvals and licences to be issued by DWER to control the emissions of waste to the environment. For wastewater treatment plants DWER has the ability to regulate odour emissions which has the potential to unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person during commissioning, and ongoing operations. Part V can apply conditions limiting waste acceptance amounts, prescribe waste treatment and containment infrastructure and odour venting methods, require emission point source monitoring (hydrogen sulphide) and site-specific odour management plans in accordance with DWER's Odour Guidelines. These measures will allow Part V to mitigate odour emissions to acceptable levels at the AWWTP premises boundary prior to any transmission of odour to sensitive receptor locations.

In addition, it is noted that Part V licences would require the licence holder to monitor and report amongst other things, emissions and discharges. Reviews of licence conditions will also provide greater responsiveness and flexibility in developing actions to respond to odour based on contemporary information and technology.

#### *Summary*

In summary, the EPA consider it appropriate for the existing conditions 12-1 to 12-7 to continue to have effect until Part V issues a works approval and/or amends the licence to explicitly regulate odour emissions. It is then appropriate for the existing MS 755 conditions to cease to have effect and the new proposed condition 12-8 to 12-11 to take effect. This timing will allow the proponent to commence infrastructure upgrades without gaps in odour regulation, while streamlining the ongoing regulation of the AWWTP odour emissions for future staged increases in throughput whilst protecting sensitive receptors outside of the zoned buffer area.

Having regard to the above, the EPA considers that:

- The construction of an additional oxidation ditch, which involves the passive venting of odours (not via the existing stack), will not result in significant odour emissions by itself, and when considered in combination with the existing

operations. It is likely that the EPA's objectives for social surroundings can still be met.

- In anticipation of DWER issuing a works approval and an amended licence under Part V of the EP Act, the current conditions are suitable to manage the odour impacts of the proposal prior to increasing the throughput.
- In the event, DWER issue a works approval and/or an amended licence under Part V of the EP Act, the current odour related conditions 12-1 to 12-7 should cease to have effect in order to avoid duplication with Part V odour requirements. The new conditions 12-8 to 12-11 should simultaneously come into effect but only if the Part V works approval and/or an amended licence contain odour management and monitoring requirements.



## 5 Conclusions and recommendations

### *Change to schedule 1 (condition 1)*

The proponent has requested removal of the requirement to vent odours via a stack in Table 1 of schedule 1 (condition 1 of MS 755 requires the implementation of schedule 1). The EPA considers it is appropriate for this particular requirement to be deleted from schedule 1 and replaced as a new condition (12-10) allowing the venting of odours without a stack in the event a works approval and/or licence issued by DWER under Part V of the EP Act and specifies the types of odour venting methods.

### *Change to condition 12*

The EPA recommends the existing conditions 12-1 to 12-7 ceases to have effect in the event a works approval and/or licence issued under Part V of the EP Act includes the regulation of odour emissions such that the outcome of condition 12-9(1) is able to be met. The EPA recommends the proposed new condition 12 (12-8 to 12-11) is inserted to provide flexibility to operate the AWWTP in accordance with current and future best practice odour management technology, allow for more appropriate regulation of odour and avoids duplication with Part V.

## Conclusions

In relation to the environmental factors, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- the proposed changes to odour venting methods from the construction of the third oxidation ditch are unlikely to result in significant additional odour emissions
- once throughput is increased, Part V can adequately regulate the proposal's odour emissions to acceptable levels
- impacts to the key environmental factor of social surroundings are considered manageable, based on the requirements of the original conditions retained in MS 755, and the imposition of the attached recommended conditions (Appendix A).

## Recommendations

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the EP Act:

1. while retaining the environmental requirements of the original conditions of MS 755, it is appropriate for venting of odours without a stack to occur once a works approval and/or amended licence is issued under Part V of the EP Act that includes odour venting methods
2. while retaining the environmental requirements of the original conditions of MS 755, it is appropriate for implementation conditions 12-1 to 12-7 cease to have effect once a works approval and/or amended licence is issued under Part V of the EP Act that includes regulation of odour emissions, and simultaneously have new implementation condition 12-8 to 12-11 take effect

3. after complying with s. 46(8) of the EP Act, the Minister may issue a statement of decision to change condition 1 (via schedule 1) and condition 12 of MS 755 in the manner provided for in the attached recommended statement (Appendix A).

## 6 Other advice

As part its inquiry into the changed conditions, the EPA has identified the need to reiterate the EPA's 'Other Advice' to the Minister for Environment in EPA Report 1239 and also by the then Minister in the Appeals Decision.

In summary, the EPA reiterates its previous advice that licences under Part V would need to be reviewed and re-assessed for each stage of development of the AWWTP. The EPA support the then Minister for Environment's view in the Appeals Decision that ultimately it is up to the proponent to operate the plant to meet acceptable odours at the 600m buffer boundary as established by the Public Purpose reservation around the AWWTP in the Metropolitan Region Scheme.

The EPA understands for future throughput increases beyond 26 ML/day, the proponent will revise the odour management plan specifically for each stage of capacity increase and submit the plan to DWER for review and approval. The EPA supports this as it will allow greater opportunity for adaptive management of future stages based on experience of past performance and specific management of advanced odour technology that may be applied in the future.

## Appendix A: Recommended conditions

### STATEMENT TO CHANGE THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL (Section 46 of the *Environmental Protection Act 1986*)

#### ALKIMOS WASTEWATER TREATMENT PLANT – SITE B CITY OF WANNEROO

**Proposal:** The construction and operation of a wastewater treatment plant, and associated ocean outfall, on the Alkimos-Eglinton Dunal System with an ultimate processing capacity of 160 megalitres per day, as documented in schedule 1 of Ministerial Statement 755.

**Proponent:** Water Corporation  
Australian Business Number 28003434917

**Proponent Address:** 629 Newcastle Street Leederville WA 6072

**Report of the Environmental Protection Authority:** 1707

**Preceding Statement/s Relating to this Proposal:** 755

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by section 46(8), it has been agreed that the implementation conditions and schedule 1 set out in Ministerial Statement No. 755, be changed as specified in this Statement.

#### **Condition 12-8 is inserted:**

12-8 Conditions 12-1 to 12-7 of Ministerial Statement 755 cease to have effect for the duration that a **works approval** and/or **licence** is in force for the proposal that includes odour management and monitoring conditions to ensure the requirement of condition 12-9(1) is met, as confirmed by the CEO in writing.

#### **Condition 12-9 is inserted:**

12-9 In the event conditions 12-1 to 12-7 of Ministerial Statement 755 cease to have effect as specified by condition 12-8, the proponent shall manage odour emissions from the proposal to ensure the following outcome is achieved:

- (1) The proposal's odour emissions do not unreasonably interfere with the welfare, convenience, comfort or amenity of any **sensitive receptor** outside of the proposal's zoned Public Purposes Reserve area as shown in the Alkimos – Eglinton Metropolitan Region Scheme.

**Condition 12-10 is inserted:**

12-10 The proponent shall continue to vent operational odour emissions through a stack until a **works approval** and/or **licence** is in force that specifies the manner in which operational odour can be vented from the proposal. The proponent shall then vent operational odour emissions in the manner specified in a **works approval** or **licence**.

**Condition 12-11 is inserted:**

12-11 In the event that odour monitoring, including odour monitoring required as a condition of a **works approval** and/or **licence** that is in force for the premises described by the proposal, indicates that the outcome of condition 12-9(1) is not being met or is not likely to be met, the proponent shall within seven (7) days report such findings to the CEO along with a description of the management actions to be taken to meet the requirements of condition 12-9(1).

**Ministerial Statement 755 Schedule 1 amendments:**

Table 1: Summary of Key Proposal Characteristics of Ministerial Statement 755 is amended by removing the text shown in strikethrough and bold:

(Note: All other characteristics in Table 1 of MS 755 remain unchanged)

Characteristic	Site B
<b>Treatment process</b>	Wastewater will be treated to an advanced secondary standard based upon the activated sludge process similar to that recently constructed at Woodman Point wastewater treatment plant. Additional treatment processes will be utilised to make the treated wastewater “fit for purpose” for disposal and re-use opportunities as and when they become available/viable. <del>Odours will be vented via an approximately 50 metre tall stack.</del>

## Abbreviations and definitions

Acronym or abbreviation	Definition or term
<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 his/her delegate.
<b>Licence</b>	A licence issued under Part V of the <i>Environmental Protection Act 1986</i> for the premises that is described by the proposal, being that which undertakes treatment of wastewater at the Alkimos Wastewater Treatment Plant – Site B proposal.
<b>Works approval</b>	A works approval issued under Part V of the <i>Environmental Protection Act 1986</i> for the premises that is described by the proposal, being that which undertakes wastewater treatment infrastructure at the Alkimos Wastewater Treatment Plant – Site B proposal.
<b>Sensitive receptor</b>	As defined in the <i>Department of Water and Environmental Regulation Odour Emissions Guideline 2019</i> , or its future revisions.

## Appendix B: Identified decision-making authorities

The decision-making authorities (DMAs) in the table below have been identified for the purposes of s. 45 as applied by s. 46(8) of the *Environmental Protection Act 1986*.

Decision-Making Authority	Legislation (and approval)
1. Minister for Planning	<i>Planning and Development Act 2005</i>
2. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> (authority to take threatened flora)
3. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> (works approval and licence)
4. Chief Executive Officer, Department of Health	<i>Health Act 1911</i> and <i>Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974</i>
5. Chief Executive Officer, City of Wanneroo	<i>Planning and Development Act 2005</i> (development approval)
6. Chief Executive Officer, Economic Regulation Authority	<i>Water Services Act 2012</i> (water services licence)

Note: In this instance, agreement is only required with DMA 1 and 2, since these DMA's are Ministers.

## References

DWER 2019, *Odour Emissions Guideline*, Department of Water and Environmental Regulation, Joondalup, WA.

EPA 2016, *Environmental Factor Guideline – Social Surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2020a, *Environmental Impact Assessment (Part IV Division 1 and 2) Procedures Manual*, Environmental Protection Authority, Perth, WA.

EPA 2020b, *Statement of Environmental Principles, Factors and Objectives*, Environmental Protection Authority, Perth, WA.

State of Western Australia 2016, *Western Australian Government Gazette*, No. 223, 13 December 2016.

Water Corporation 2020a, *Alkimos Wastewater Treatment Plant – Section 45C Application*, Water Corporation, Leederville, WA.

Water Corporation 2020b, *Alkimos Wastewater Treatment Plant – Section 46 Application*, Water Corporation, Leederville, WA.

Water Corporation 2020c, *Odour Risk Assessment – Alkimos Wastewater Treatment Plant 26MLD Upgrade*, prepared by Tonkin and Taylor Pty Ltd for Water Corporation.